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Mathematics Grade Two

Module 2: Working with Big Numbers

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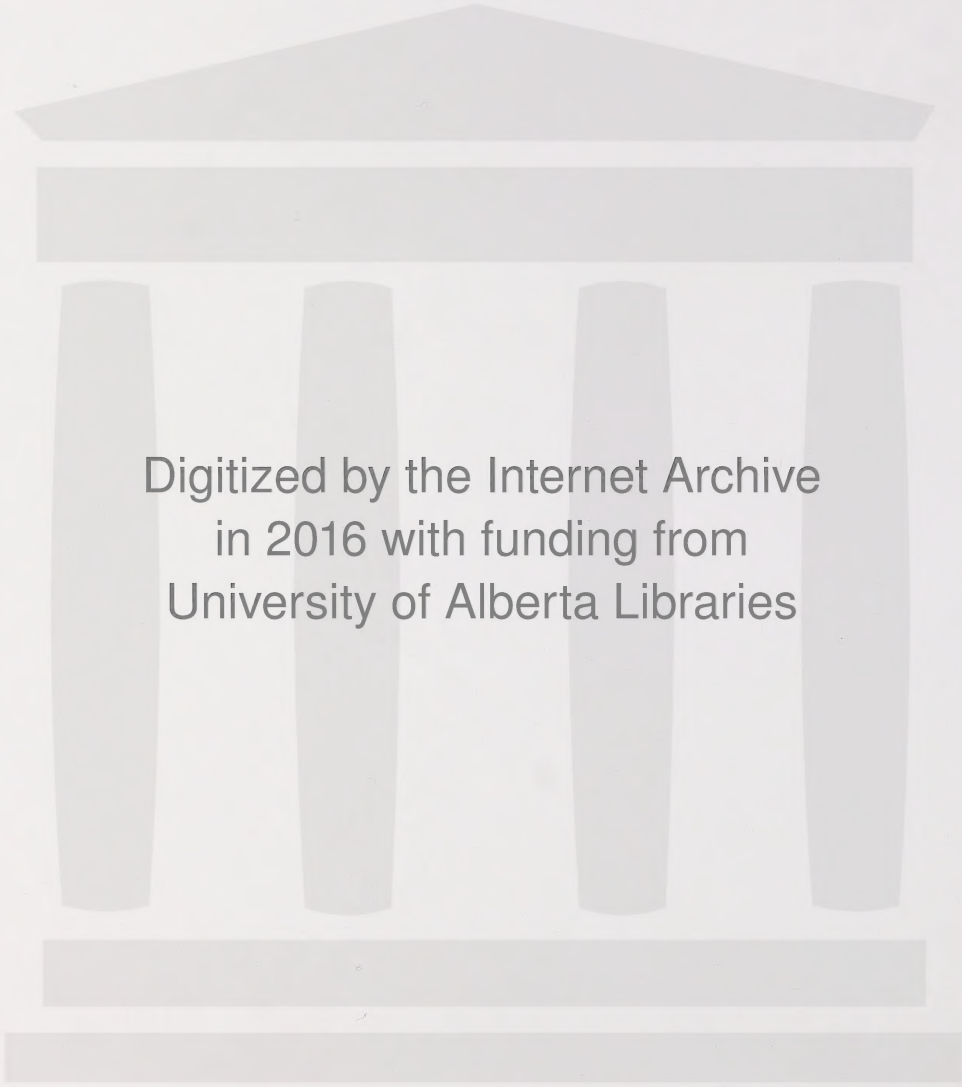
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Grade Two Mathematics: Module 2

Working with Big Numbers

Learning Technologies Branch

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Grade Two Mathematics
Module 2: Working with Big Numbers
Student Module Booklet
Learning Technologies Branch
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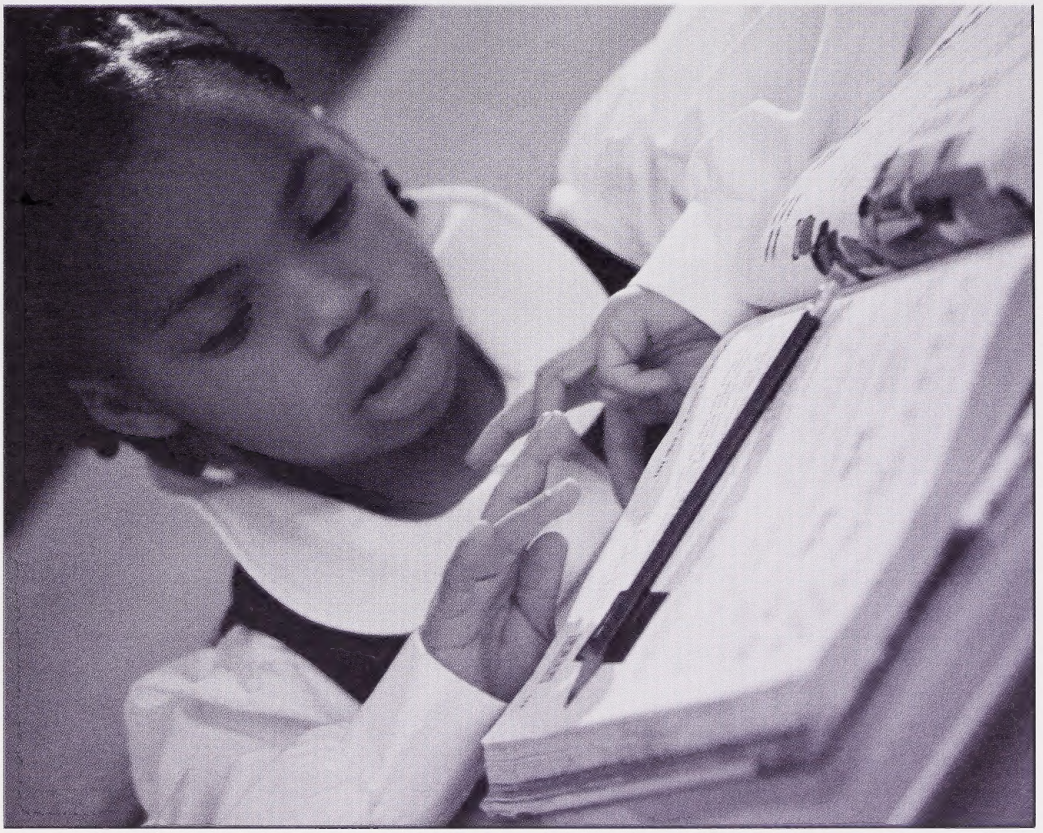
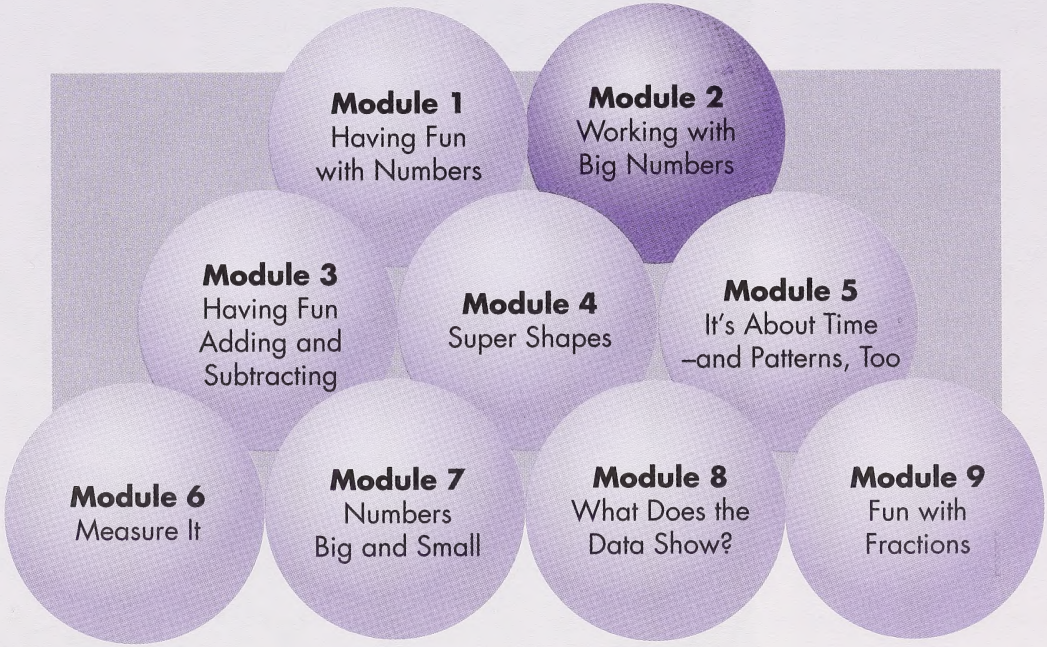
Welcome
to Grade Two Mathematics



Have you ever shared a cookie with a friend? Did you try to break it evenly so that you each got the same amount of cookie? Have you tried to figure out how tall you are? Can you tell how much time you have to do something? How much does something weigh? In Grade Two Mathematics, you will learn how to do these activities.

Look at the picture on this page. It gives the titles of the Student Module Booklets you will be using. You are using Module 2: Working with Big Numbers now.



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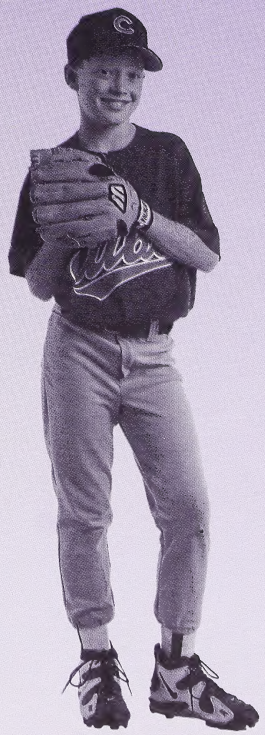
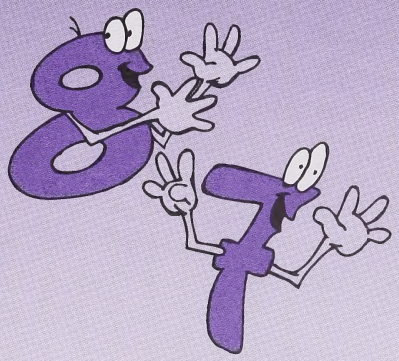
Working with Big Numbers

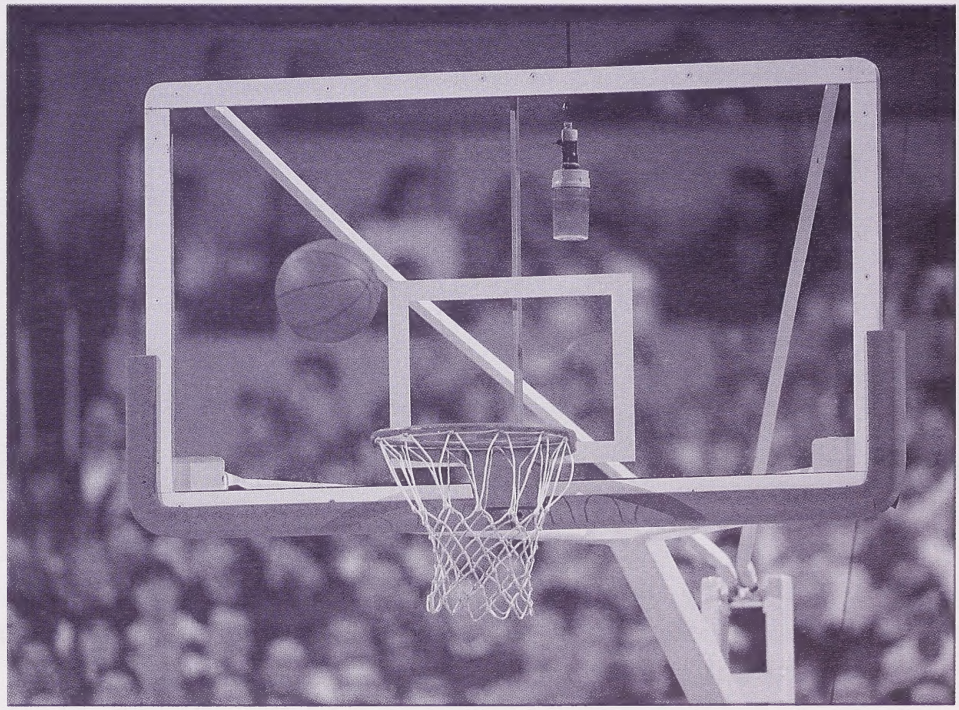


Have you ever looked up at the sky and seen a flock of birds and wondered how many there were? Have you ever seen a herd of cows and tried to count them all? Have you ever been to a concert or a sporting event and wondered how many people were there?



Sometimes it's hard to say exactly how many there are of something. And sometimes you don't need to know the exact number. You can guess the number.

In the last module, you were working with numbers. In this module, you will learn even more about working with numbers, especially big numbers. You will get to do fun things with blocks and cubes.



Day 1: Guess How Many

Today is the first day of Module 2.

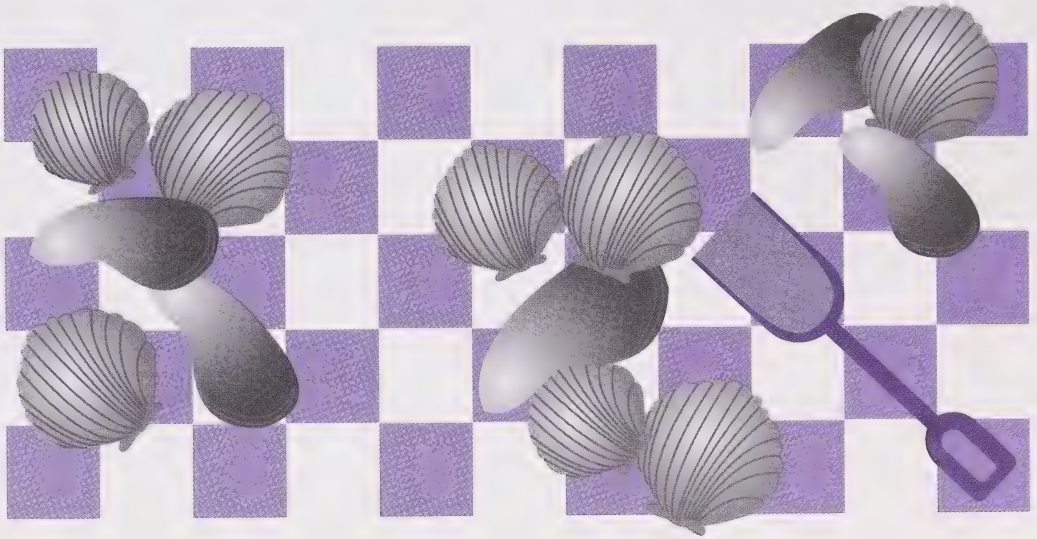
You will be looking at collections of objects and making a guess of how many objects there are in each collection.

You will also have a chance to guess how many objects there are by skip counting.

Lesson 1

Elena and Jasper were at home one day playing with their shell collection. They had gathered them on the beach last summer when they visited their friends on Vancouver Island.

They spread out all the shells on the floor. Elena asked Jasper, "About how many shells do you think there are?"



The student should not count the shells, as this is an estimate. Make this clear to the student.

About how many shells do you think there are? ☐

Guess How Many

Lesson 2

Your home instructor will now show you a group of objects. Guess, or make an **estimate**, about how many objects there are.

What is your estimate? ☐

Was it a close estimate? Circle

or

.

Now you have an idea about what it's like to estimate something on your own. See what Jasper did with his estimate of the shells.

Jasper estimated that there are about 15 shells. He then counted them. Now you count the shells.

How many shells are there? ☐

Was Jasper's estimate a good one? Circle

or

.

Was it greater or fewer than the actual number?

_____ By how many? ☐

Show the student the box of items or shelf of books you have arranged before the lesson. Continue with this exercise as described in the Home Instructor's Guide.

Discuss how Jasper's estimate was a good one, since 15 is close to 13. The student should know that Jasper's estimate was off by two. Tell the student that the words *actual number* means the number that it really is.

Lesson 3

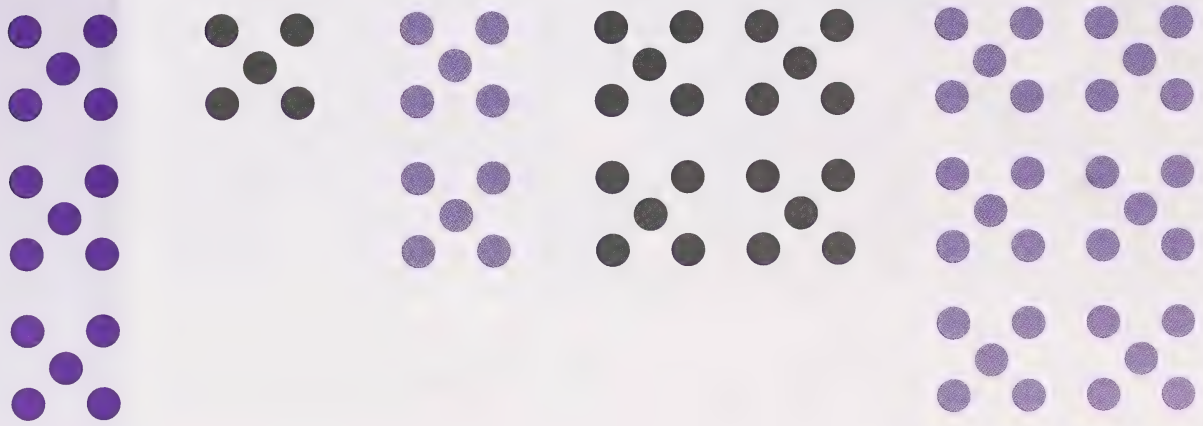
Discuss why Jasper estimated 15. Brainstorm ways he came up with his answer. Talk about how the shells are loosely grouped in fives, with a few left over.

Look at the picture of the shells. How did Jasper know to estimate 15 and not 10, 5, or 20? Can you think how he came to his estimate?

Jasper knows groups of 5 when he sees them. That is what helped him estimate the number of shells.

See how well you do with groups of 5.

Look at the groups of 5 dots. Find three groups of 5 and put an orange circle around them. Find two groups of 5 and put a box around them. Find six groups of 5 and put a green circle around them.



Guess How Many

What does the number 5 mean to you? Think of some things that have the number 5 in them.

Circle the items that show 5.

Have the student brainstorm ways that 5 can be represented.

Some examples follow:

- A hand has 5 fingers.
- An address or phone number may have 5s in it.
- The student's sister is 5 years old.
- $3+2=5$
- $6-1=5$
- It's half of 10.
- It's one more than 4.

Guess How Many

Day 1

Skip count by fives on this one hundred chart, starting at number 5. Each time you say a number, colour it pink.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Day 1

Guess How Many

What do you see on the chart? Do you see a pattern? What is it? Are there any numbers that always appear?

What are they? _____

For more practice estimating, go to the Extension Activities.

Go to Assignment Booklet 2A.

Discuss the pattern 5 makes on the one hundred chart. The student should see that there is always a 5 or 0 in each number.

Have the student read aloud the coloured numbers from 5 to 100. Then have the student skip count by 5s to 100 by memory.

Day 2: Numbers by the Sea

Today you will keep on estimating numbers. You will estimate larger numbers of items.

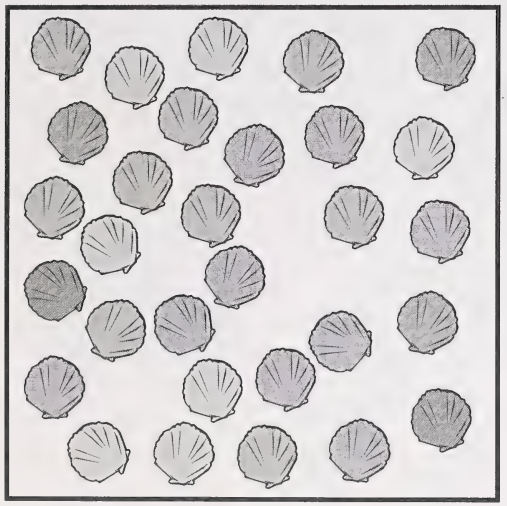
You will skip count by tens to help you estimate.

Numbers by the Sea

Lesson 1

Jasper was finding it hard to estimate larger numbers of things. Elena thought she could help. She showed him some pictures she took on the coast of British Columbia. See how well you do with them.

Take a quick look at the pictures and decide about how many there are. Do not count the shells.



Are there more than 20 shells?

Circle Yes or No.

Are there fewer than 20 shells?

Circle Yes or No.

What is your estimate? ☐

After the student has estimated, count the shells with the student to verify the answer. If the estimate was close, tell the student so. If not, review estimation with the student again.

Numbers by the Sea

Talk to the student about how a good estimate can be made by looking without counting. The pictures give an example of how a good estimate can be made quickly.

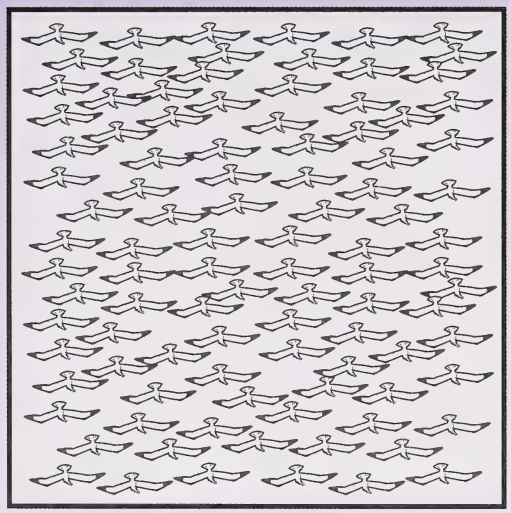
Look at these pictures.

Which picture has about 10 seagulls? _____

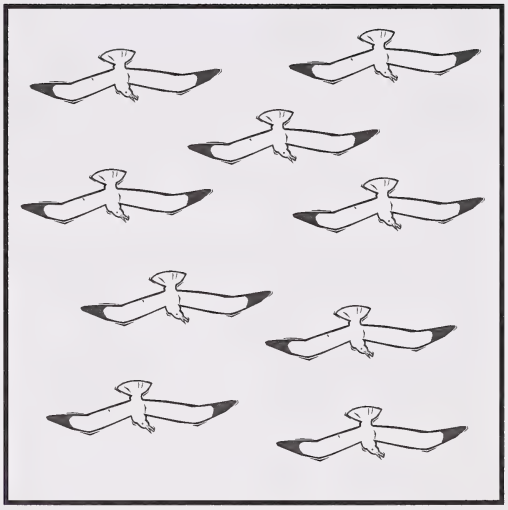
Which picture has about 30 seagulls? _____

Which picture has about 100 seagulls? _____

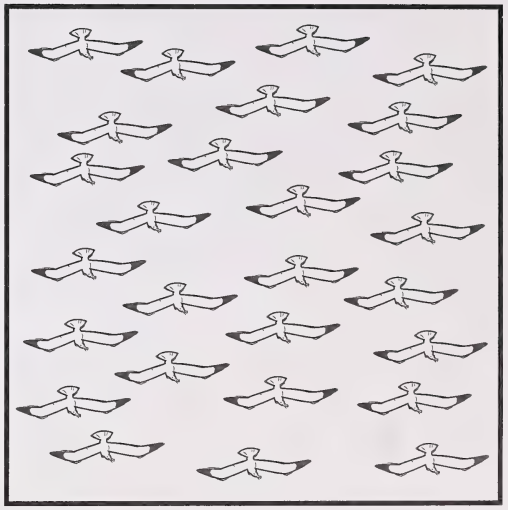
Picture A



Picture B



Picture C



Count the number of seagulls in each picture.

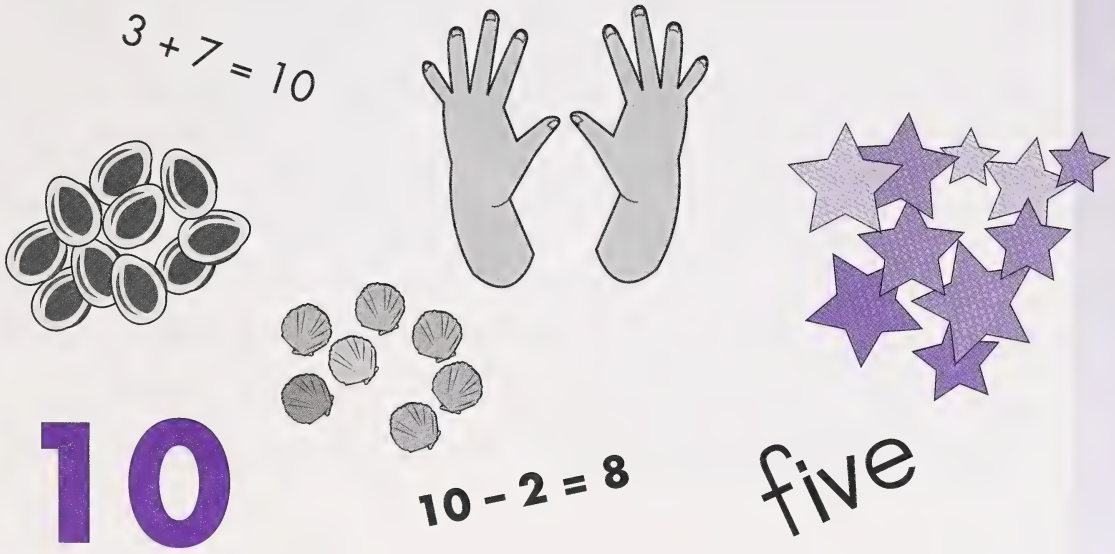
Did you make good estimates? Circle Yes or No.

Lesson 2

Jasper soon realized that estimating **bigger** numbers was easier when he thought of groups of 10.

Elena had him think of things that have groups of 10 in them. He thought of many things. Can you?

Circle the items that show 10.

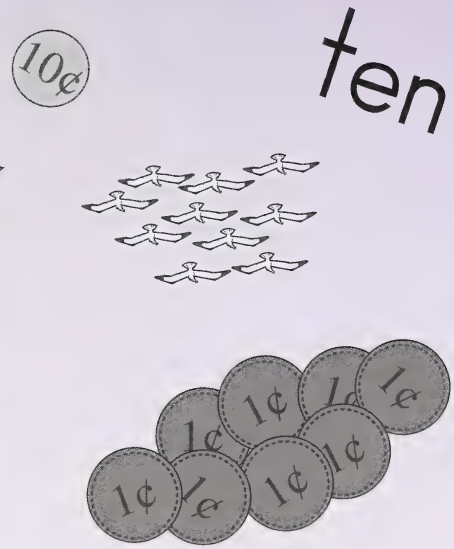


Numbers by the Sea

Have the student brainstorm ways that 10 can be represented.

Some examples follow:

- The student has 10 fingers.
- A sibling or friend might be 10 years old.
- 5 + 5 = 10
- It's the number after 9 and the number before 11.
- A dime has 10 cents.



Numbers by the Sea

Day 2

Discuss the pattern 10 makes on the one hundred chart. The student should see that there is always a 0 in each number. Have the student read the coloured numbers out loud from 10 to 100. Then have the student skip count by 10s to 100 by memory.

Skip count by tens on this one hundred chart, starting at number 10. Each time you say a number, colour it purple.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Numbers by the Sea

What do you see on the chart? Do you see a pattern? What is it? Is there any number that always appears?

What is it? ☐

Lesson 3

Look at the items spread out before you.

Spread out about 80 items (such as buttons or cubes) on a table.

Estimate the number. ☐

Count the tens. How many are there? ☐

Let the student see you group the items into sets of ten. Group the leftover ones near the tens. Help the student answer the questions if necessary.

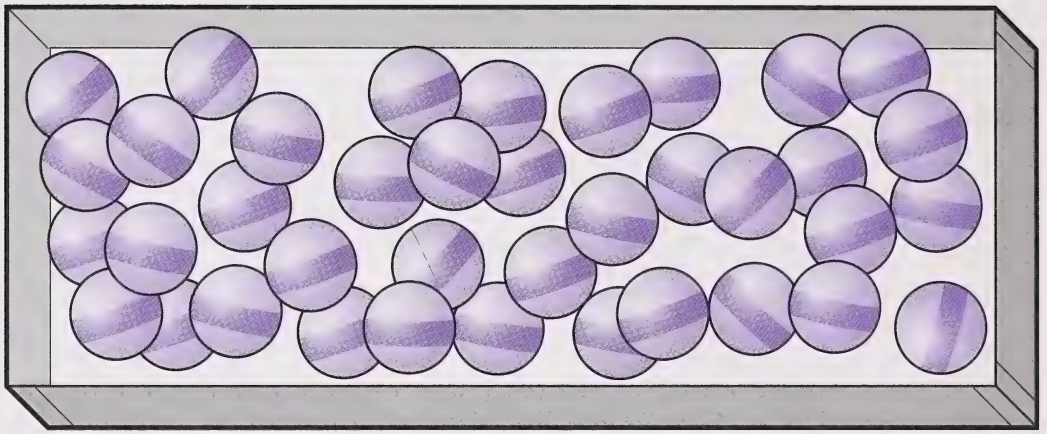
Count the ones left over. How many are there? ☐

What is the actual number of items? ☐

Is your estimate greater or fewer than the actual count?

_____

Estimate the number of balls in the box. ☐



Help the student group tens into circles if necessary.

Now circle the balls into groups of ten.

How many tens are there? ☐

How many ones are there? ☐

What is the actual number of balls? ☐

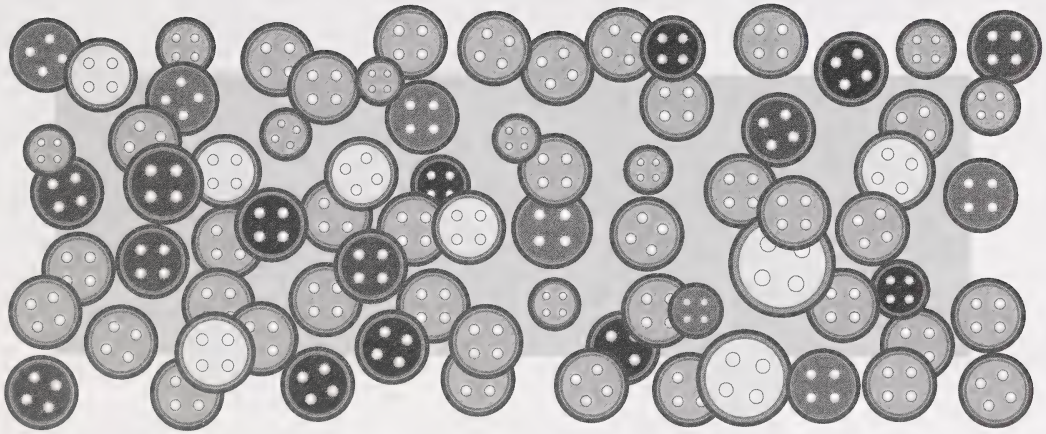
Numbers by the Sea

Is this greater or fewer than your estimate?

_____

For more practice estimating and skip counting, go to the Extension Activities.

Go to Assignment Booklet 2A.



Day 3: Guess Again

Today you will continue to estimate a number of objects.

You will continue counting by tens.

You also will be working with ones and tens.

Guess Again

Lesson 1

Remember grouping tens from the other day? Try it on your own.

Look at the items spread out before you.

Estimate the number. ☐

Now put the items into groups of ten.

Count the tens. How many are there? ☐

Count the ones left over. How many are there? ☐

What is the actual number of items? ☐

Is your estimate greater or fewer than the actual count?

_____

Spread out about 93 items of a manipulative not yet used.

Let the student group the items into sets of ten. Help the student answer the questions if necessary.

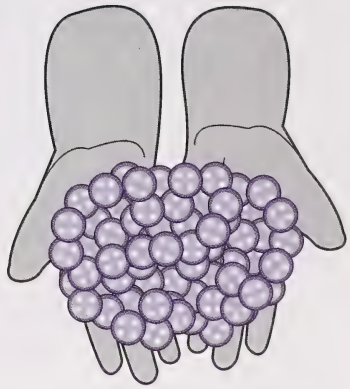
Estimate how many items you think you can pick up with one hand. ☐

Pick up a handful of the items. Now count how many you picked up.

What is the actual number you picked up? ☐

Is this greater or fewer than your estimate? _____

Now, estimate how many items you think you can pick up with two hands. ☐



Pick up two handfuls. Now count them out.

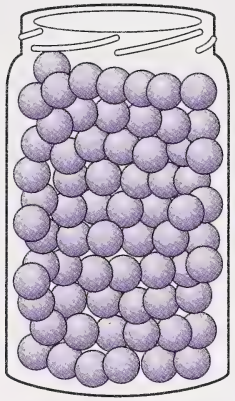
What is the actual number you picked up? ☐

Is this greater or fewer than your estimate? _____

Guess Again

Lesson 2

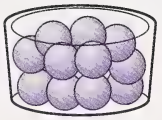
Take a careful look at the jar of items your home instructor has prepared.



Estimate how many items there are in the jar. ☐

Now empty the jar.

Look at the small container filled with the items. There are about ten items in there.



Prepare a jar of about 70 items. These can be dried beans, buttons, or any item that will fill a jar.

Fill a small container full with about ten items. Do not count the items out with the student. Just say that it contains about ten items.

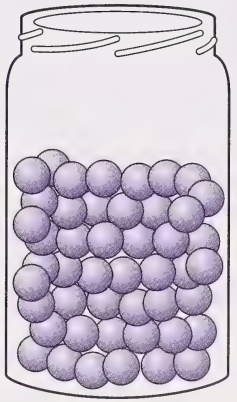
Guess Again

Pour the items from the small container into the jar.

Now see how the jar looks with one containerful of the items in it.

Fill the small container four more times and pour the contents into the jar. Count out loud each time you fill the container and pour it into the jar. Have the student count with you. Don't forget to count the full container already poured into the jar.

Count each containerful as it goes into the jar.



Guess Again

So far, how many scoopfuls went into the jar? ☐

Estimate about how many items you think are in the jar now. ☐

(Don't forget about the scoopful already in the jar.)

Why do you think there are that many in the jar?

Your home instructor just filled up the container.

How many scoopfuls went into the jar altogether? ☐

What is your final estimate? ☐

What was your first estimate? ☐

Is your first estimate the same as or different from your new estimate? _____

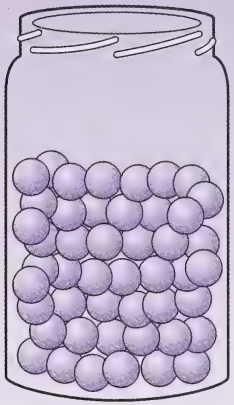
The student should estimate that there are now about 50 items in the jar, since there are five scoopfuls of ten. That means you are counting by tens with each scoopful. Ensure the student understands this concept before you continue.

Continue filling up the jar until it is full. You should only have to put 2 more scoops into it for a total of about 70 items.

Guess Again

Day 3

Have the student explain his or her estimate orally. Discuss the new and old estimates.



Is it greater or fewer than your first estimate?

_____

Why do you think it is different now?

Now take all the items out of the jar.

Group the items into tens. How many tens are there? ☐

How many ones are there? ☐

What is the actual number of items? ☐

Is it greater or fewer than your final estimate?

_____

Was your final estimate a good one? Why or why not?

Guess Again

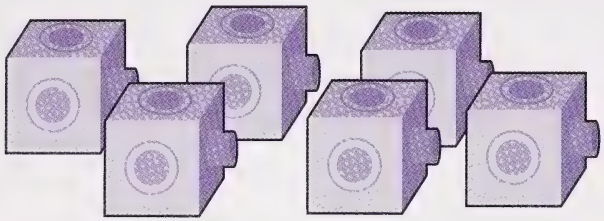
Lesson 3

Take the base ten blocks and unit cubes from your Math Box.

What is the actual number of items that filled the jar from Lesson 2?

Have the student recall how many items were in the jar. Remind the student to look at how many tens and ones there are. The student can piece ten cubes together to represent a ten, then make as many as are needed to represent the tens. Single cubes can represent the ones.

Use your interlocking cubes to show that number another way.



Now use your base ten blocks to show the number.

This will be repeated with the base ten blocks. Review the base ten and one blocks before the student represents the number.

Guess Again

Day 3

When drawing the number, the student can draw groups of tens and ones in any way. They may look like the unit cubes or base ten blocks. The student could also represent the number using other numbers. For example, if the number is 84, the student could write the number *10* eight times and number *1* four times, or write $80 + 4$, or the student may come up with a representation in a different way. Ensure the student is correct whichever way is chosen.

Draw a sketch of the number.

Go to Assignment Booklet 2A.

Day 4: Tricky Objects

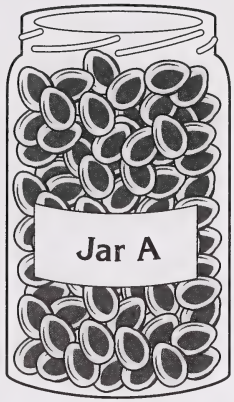
In today's lessons you will still be estimating the number of objects.

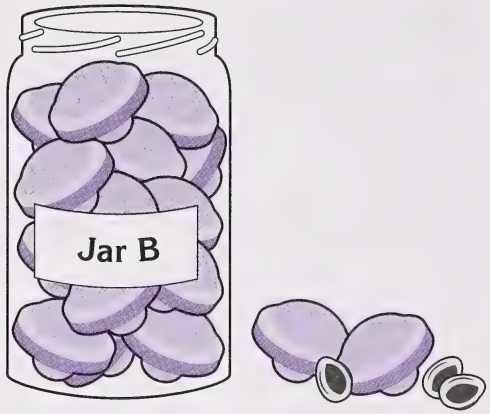
You will look at objects that are different sizes.

You will also use your base ten blocks to show tens and ones.

Lesson 1

Jasper thought he would trick Elena. He put two different types of objects into jars that were the same size. He asked Elena to estimate how many objects were in both. Your home instructor will show you what Jasper did.





Estimate the number of items in Jar A. ☐

Estimate the number of items in Jar B. ☐

After you write your estimate, take the items out of Jar A and group them into tens. Now count them.

What is the actual number? ☐

Is it greater or fewer than your estimate? _____

Take the items out of Jar B and group them into tens.

Now count them. What is the actual number? ☐

Is the actual number greater or fewer than your estimate? _____

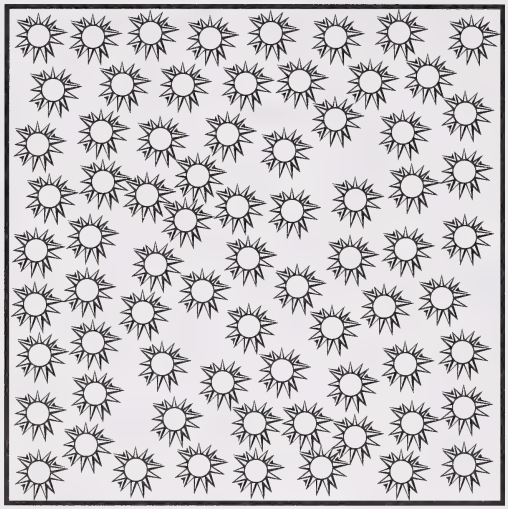
Which jar had the greater number of items? _____

Why do you think Jar A had so many more items in it when it is the same size as Jar B?

Jasper didn't trick Elena after all. She knew that Jar A would have more objects in it. Did you?

Lesson 2

Jasper was beginning to understand how to estimate larger numbers. He practised some more. This is what he worked on. See how well you do on these.



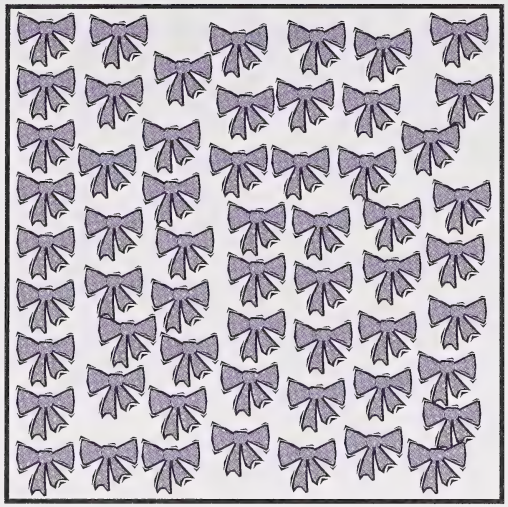
I estimate ☐ suns.

Now circle the suns into groups of tens in the box and answer how many tens and ones there are.

☐ tens ☐ ones

The actual number is ☐.

Is this actual number greater or fewer than your estimate? _____



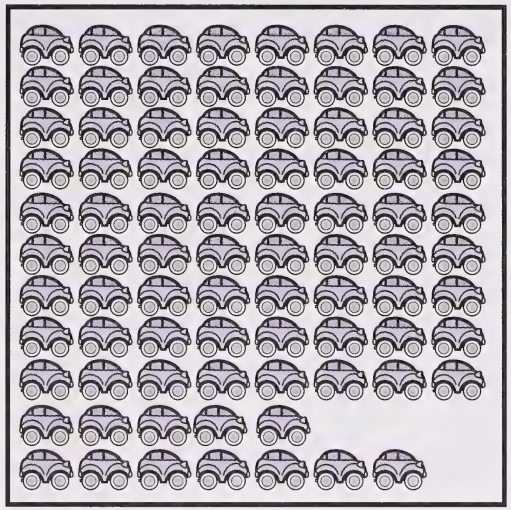
I estimate ☐ bows.

Now circle the bows into groups of tens in the box and answer how many tens and ones there are.

☐ tens ☐ ones

The actual number is ☐.

Is this actual number greater or fewer than your estimate? _____



I estimate ☐ cars.

Now circle the cars into groups of tens in the box and answer how many tens and ones there are.

☐ tens ☐ ones

The actual number is ☐.

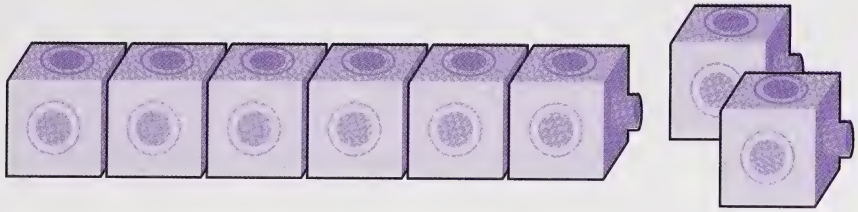
Is this actual number greater or fewer than your estimate? _____

Tricky Objects

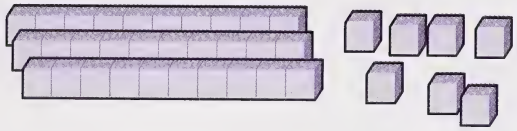
Take out your unit cubes and base ten blocks from your Math Box.

Assist the student with these activities if necessary.

Show the numbers in Lesson 2 using your unit cubes.



Now show them using the base ten blocks.



For more practice estimating and using tens and ones, go to the Extension Activities.

Go to Assignment Booklet 2A.

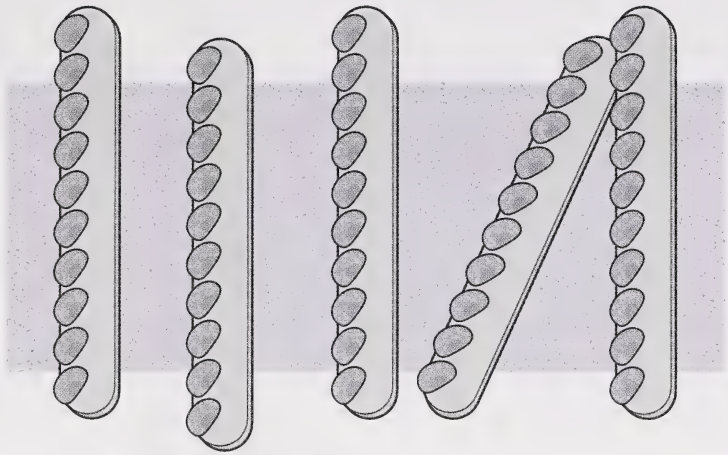
Day 5: Making Tens

Today you will be counting by tens. You will use bean sticks to help you do this.

You will also continue to estimate.

Lesson 1

Take out the bean sticks you made at the beginning of this module. Look at these bean sticks.



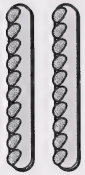
These bean sticks can help you estimate.

Estimate the number of beans you have altogether on the bean sticks. ☐

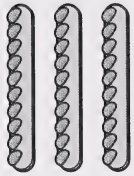
Look at your bean sticks. How many did you make? ☐

How many beans are on one bean stick? ☐

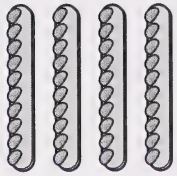
How many beans are on two bean sticks? ☐



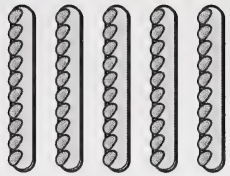
How many beans are on three bean sticks? ☐



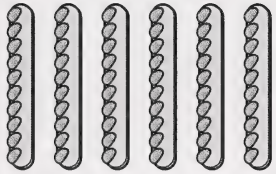
How many beans are on four bean sticks? ☐



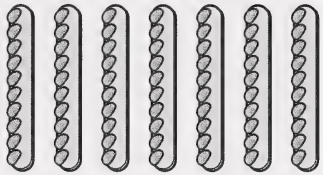
How many beans are on five bean sticks? ☐



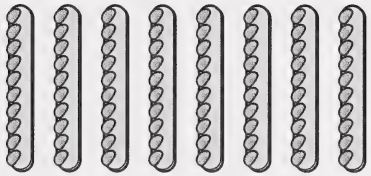
How many beans are on six bean sticks? ☐



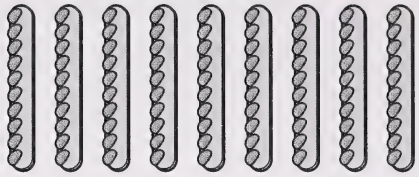
How many beans are on seven bean sticks? ☐



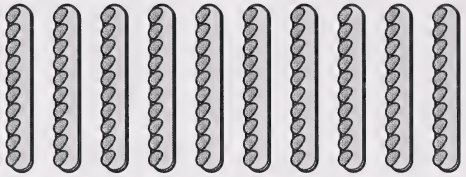
How many beans are on eight bean sticks? ☐



How many beans are on nine bean sticks? ☐

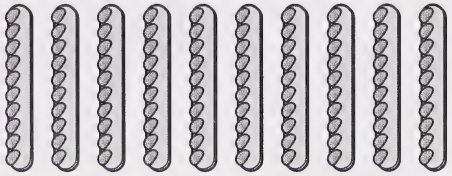


How many beans are on ten bean sticks? ☐



You have ten bean sticks. How many beans are there in total on the ten bean sticks? ☐

Was your estimate greater or fewer than the actual number? _____

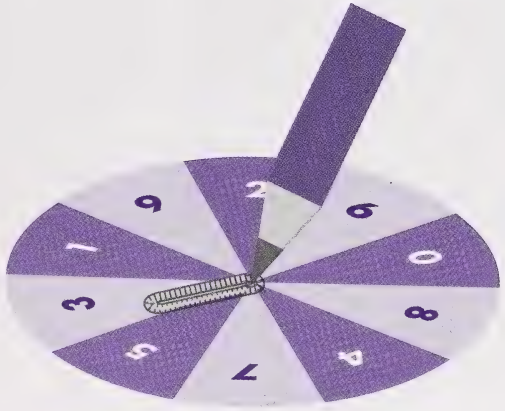


Lesson 2

Practise using the bean sticks by playing the Spinning Game.

Your home instructor will give you a spinner to use for the Spinning Game.

Spinning Game



This is how to play the game. You will need a separate piece of paper to write down the numbers.

1. Spin the clip on the spinner. Write down the number. Place that number of bean sticks on your desk.

2. Spin the clip again. Write down the second number. Place that number of single beans beside the bean sticks.

3. Write down the number of beans you now have.

Keep playing this game until your home instructor tells you to stop.

Place your spinner into your Student Folder when the game is over.

Day 6: This Is the Place

Today you will work with place value.

You will have a chance to use a Place-Value Mat.

This Is the Place

Lesson 1

Refer to the Home Instructor's Guide before starting this lesson.

Your home instructor just showed you some beans and bean sticks.

Did you see more than 30? Circle Yes or No.

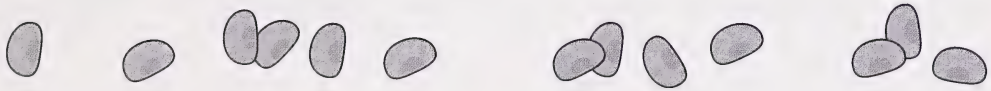
How could you know that so quickly? Did you count each one?

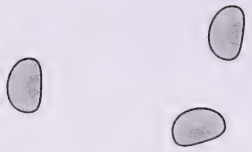
Are there more than 40 beans? Circle Yes or No.

How do you know that?

Now count the number of beans on the Place-Value Mat.

Afterwards, count the number, starting with the bean sticks: 10, 20, 30, 31, 32, 33, 34.





Lesson 2

Do you think it matters whether you count the tens or ones first?

Circle

or

.

Try it.

Point to each bean as the student counts: 1, 2, 3, 4. Then point to each bean stick and count: 14, 24, 34. Practise this with the student until it is understood.

Look at the Place-Value Mat from Lesson 1. Count the ones first. Then add the tens to it.

Did you get a different count when you started counting the beans in the ones column first?

Circle

or

.

So, does it matter how you count? Circle

or

.

There are many ways of counting. You will decide which way you like best.

This Is the Place

Lesson 3

Look at the bean sticks and beans from Lesson 1. On your Place-Value Mat, write down the number.

Your home instructor will change the number of bean sticks and beans on the Place-Value Mat. Write down each number on your Place-Value Mat.

Now, look at these numbers:

26 62 31 79 44

Take your bean sticks and beans and show these numbers on your Place-Value Mat.

For more practice showing tens and ones, go to the Extension Activities.

Go to Assignment Booklet 2A.

Give the student the laminated Place-Value Mat from the Appendix.

The student will write 3 in the tens column and 4 in the ones column. Review the concept with the student if it is not understood.

Repeat this procedure five times, changing the number of bean sticks and beans on your Place-Value Mat each time. Each time you do so, the student writes the numeral on his or her Place-Value Mat.

Have the student show each number on the Place-Value Mat. First, have the student place the bean sticks in the tens column and the beans in the ones column. The student then writes the number on the mat. Check each number before the student clears the mat.

Day 7: It Has Its Place

So far in this module you have used bean sticks to show tens and ones. Can you think of different ways of showing tens and ones?

Today you will show tens and ones in different ways.

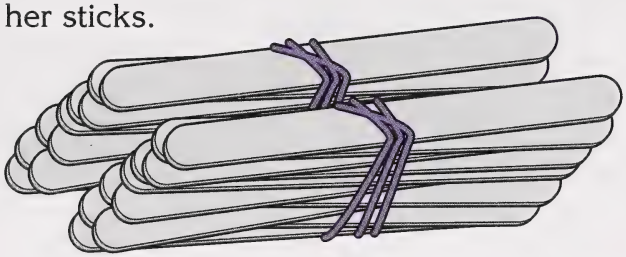
It Has Its Place

Lesson 1

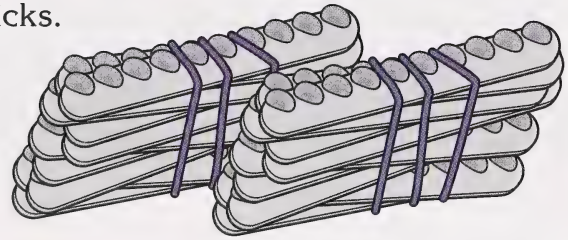
Elena and Jasper's teacher asked them to think of different ways of showing tens and ones. This is what they came up with.

Elena remembered her mother had bought a box of wooden craft sticks the last time they were in Medicine Hat. Her mother thought they would come in handy some day and she was right!

Here is how Elena bundled her sticks.



Jasper put together his bean sticks.



Can you think of other ways to show tens and ones?

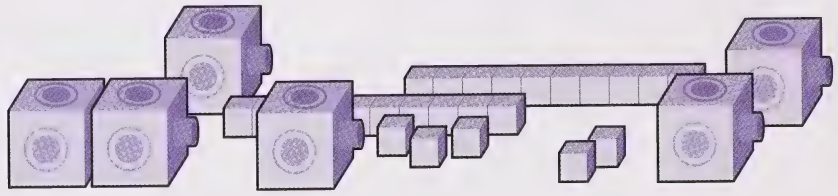
The student knows from Grade One Mathematics that rods indicate tens. Review this with the student.

Lesson 2

Now, using your wooden craft sticks, make 4 bundles of 10.

How many sticks does that make? ☐

Take your interlocking cubes and make 6 rods of 10.



How many cubes does that make? ☐

Using your base ten blocks, show 80 with the rods.

How many rods did you use? ☐

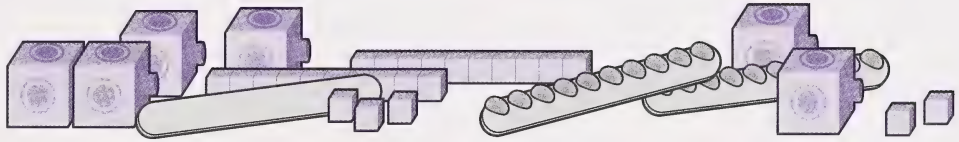
With your bean sticks, show 100.

How many bundles of bean sticks did you use? ☐

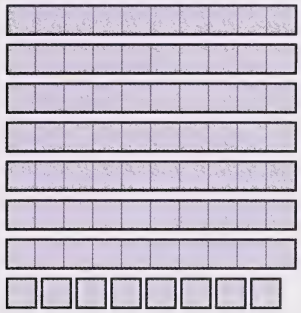
Take out your Place-Value Mat.

On your Place-Value Mat, show the following numbers:

- With your interlocking cubes, show 46.
- With your base ten blocks, show 91.
- With your wooden craft sticks, show 39.
- With your bean sticks, show 10.
- With your base ten blocks, show 7.
- With your interlocking cubes, show 15.
- With your wooden craft sticks, show 22.
- With your bean sticks, show 53.
- With your base ten blocks, show 35.
- With your interlocking cubes, show 74.
- With your base ten blocks, show 87.
- With your bean sticks, show 68.

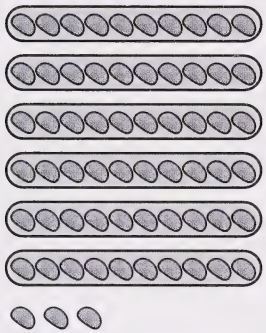


Count and print the number for each of the following.

1. 

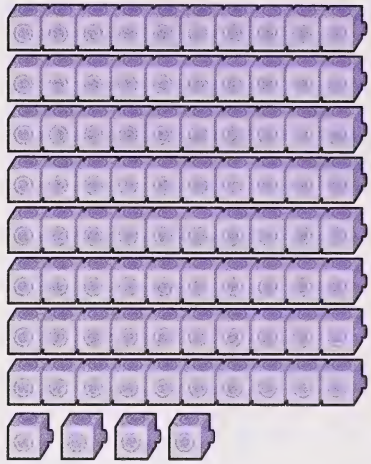
a. ☐ tens ☐ ones

b. The number is ☐.

2. 

a. ☐ tens ☐ ones

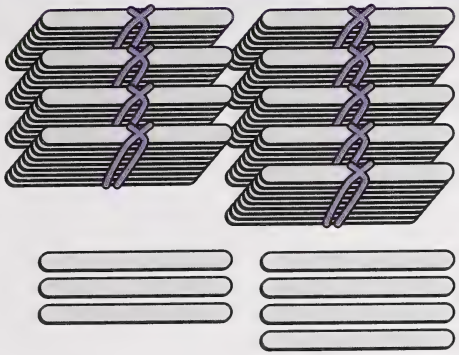
b. The number is ☐.

3. 

a. ☐ tens ☐ ones

b. The number is ☐.

4.



a. ☐ tens ☐ ones

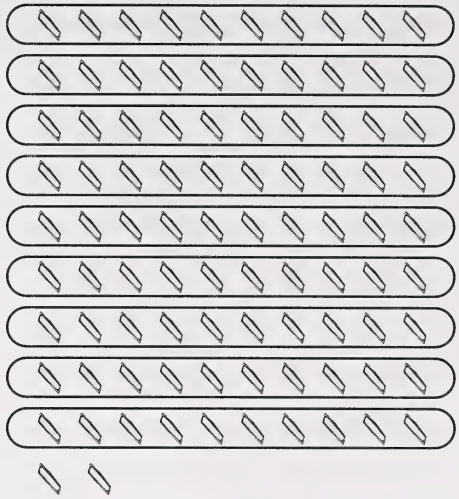
b. The number is ☐.

5.

a. ☐ tens ☐ ones

b. The number is ☐.

6.



a. ☐ tens ☐ ones

b. The number is ☐.

Day 8: Using More and Fewer

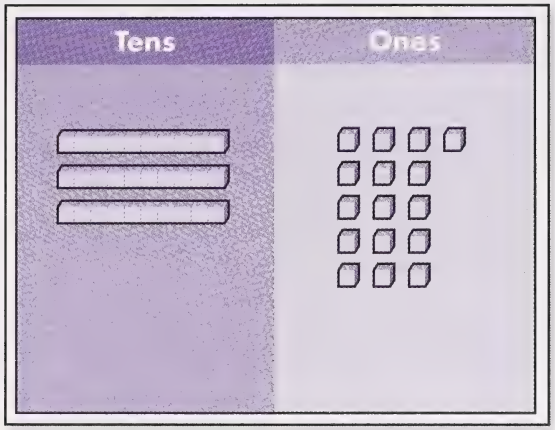
Have you ever taken nickels and dimes and traded them for a quarter? If so, you have shown a number in more than one way.

Today you will learn to show numbers in more than one way by using more and fewer tens and ones.

Lesson 1

Elena showed Jasper these rods. She wondered if she could trick him.

Jasper knew Elena was trying to trick him, but he knew what to do. He put the rods on his Place-Value Mat.



How many tens are there? ☐ How many ones are there? ☐ What is this number? ☐

Jasper knew that he had to put the cubes in the ones column into groups of ten. He made one group of ten. Do you know what he did with that ten?

Yes, he put it into the tens column.

Now how many tens did he have? ☐

How many cubes were left in the ones column? ☐

Jasper wasn't tricked. He knows that numbers can be shown in many different ways. He knows that ten single cubes show ten, just as one rod shows ten. Either way is correct.

Lesson 2

Take your interlocking cubes out of your Math Box.

Take your Place-Value Mat out of your Student Folder.

Using More and Fewer

With your cubes, build the tens and show 47 on your Place-Value Mat.

Now print the number on this place-value chart.

Tens	Ones

Can you think of any other way to show 47? Remember what Jasper did in Lesson 1? Try the same with your cubes. Use your Place-Value Mat to help you.

Your home instructor will help you show 47 in different ways.

Print each new way of showing 47 on this place-value chart.

Tens	Ones	Number

The student should build 4 tens with the cubes and have 7 single cubes left over. Ensure the student printed 4 in the tens column and 7 in the ones column. Guide the student through the next exercise.

Lesson 3

1. a. What number is shown by these blocks? ☐

b. ☐ tens ☐ ones

c. Fill in the place-value chart to show this number.

Tens	Ones	Number

d. How many blocks are used to show this number? ☐

How can you use more blocks to show the same number?

Have the student count the rods and cubes. The answer should be 19 blocks.

Guide the student into answering that you can take a ten and turn it into ones. Now you have ten more blocks.

By using more blocks, the number now looks like this:

2. a. What number is shown by these blocks? ☐

b. ☐ tens ☐ ones

c. Fill in the place-value chart to show this number.

Tens	Ones	Number

d. How many blocks are used to show this number? ☐

e. Is that more blocks than were used in question 1?

Circle

or

.

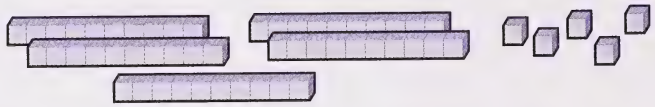
f. Is it the same number as in question 1?

Circle Yes or No.

Why is that?

Even though the number now looks different, it is still the same number. By using more blocks, you still get the same number because there are always 55 ones.

See what happens when you use fewer blocks.



3. a. What number is shown by these blocks? ☐

b. ☐ tens ☐ ones

c. Fill in the place-value chart to show this number.

Tens	Ones	Number

d. How many blocks are used to show this number? ☐

Using More and Fewer

e. Is that fewer blocks than were used in questions 1 and 2?

Circle or .

f. Is it still the same number as in questions 1 and 2?

Circle or .

Why is that?

Now, complete the chart to show the three different ways that were used to make 55.

Tens	Ones	Number

With your base ten blocks, build the numbers below by using more and fewer blocks.

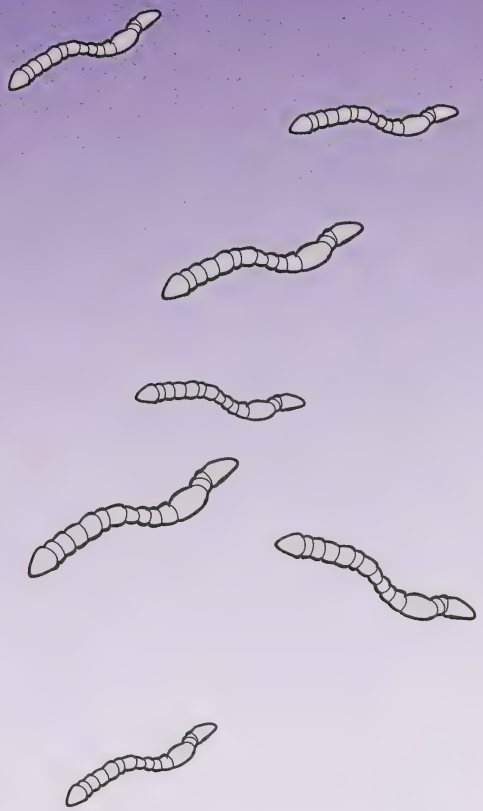
33 75 90 67 58 82

Remember, even though the number now looks different, it is still the same number. By using more blocks, you still get the same number.

Watch the student build the numbers indicated, ensuring the student does so correctly.

Using More and Fewer

Day 8



After you build your numbers, fill in the charts below for each number. The first one has been started for you.

Tens	Ones	Number
3	3	33
		33
		33

Tens	Ones	Number

Tens	Ones	Number

Tens	Ones	Number

Tens	Ones	Number

Tens	Ones	Number

Go to Assignment Booklet 2A.

Day 9: Practice Makes Perfect

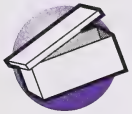
In this module you have learned many new ways of working with numbers. It's time now to review what you have learned.

Today you will practise showing numbers using more and fewer blocks.

Have the student use the base ten blocks as you complete the activity together. The student will show each representation of the numbers.

Lesson 1

Jasper and Elena wanted a little more practice building numbers using more and fewer blocks. They thought you might want to have some more practice, too.



Take your base ten blocks out of your Math Box.

Look at the chart. Fill in the missing number.

Tens	Ones	Number
8	1	

Now look at some of the different ways of making that number. Using your blocks, build the number in the different ways shown.

Tens	Ones	Number
8	1	81
7	11	81
0	81	81
5	31	81

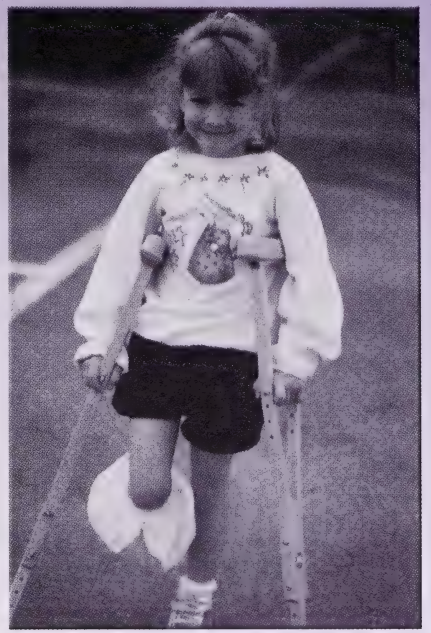
Practice Makes Perfect

Do the same with these numbers.

Tens	Ones	Number
5	13	63
3	33	63
6	3	63
4	23	63

Tens	Ones	Number
4	56	96
9	6	96
6	36	96
7	26	96

Tens	Ones	Number
5	28	78
7	8	78
0	78	78
6	18	78



Fill in the missing numbers. Use your blocks to help you.

Tens	Ones	Number
5		70
	10	70
	40	70
7		70

Tens	Ones	Number
	19	59
3		59
	9	59
	39	59

Tens	Ones	Number
	17	47
4		47
	37	47
2		47

Tens	Ones	Number
7		92
	2	92
8		92
	42	92

Tens	Ones	Number
	25	85
8		85
	15	85
4		85

Tens	Ones	Number
	10	100
7		100
	50	100
6		100

Go to Assignment Booklet 2A.

Day 10: Show How Many

Do you like to draw? Jasper and Elena like to draw. They will draw to show tens and ones.

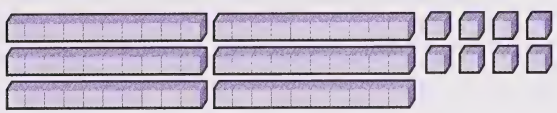
Today you will get to draw, too. You will be drawing tens and ones.

Lesson 1

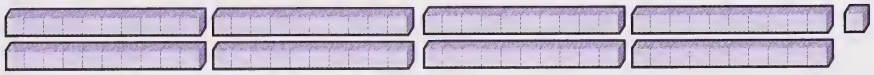
Jasper and Elena told their home instructor that they liked to draw. Sometimes drawing helped them learn better. So they started drawing their blocks. See if it helps you, too.

Jasper and Elena began by building and drawing the following numbers. Fill in the tens and ones for each number.

68

 ☐ tens ☐ ones

81

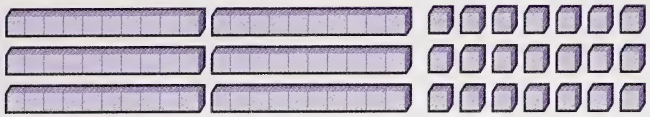
 ☐ tens ☐ ones

Then they used more blocks for 68 and 81. Fill in the tens and ones.

68

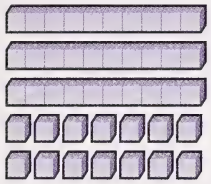
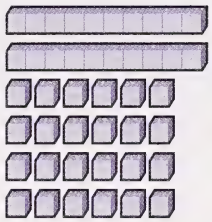
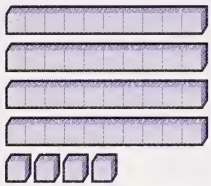
☐ tens ☐ ones

81



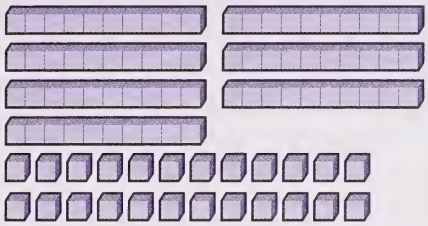
[ ] tens [ ] ones

Now you try building and drawing numbers. An example has been done for you.

How many? 44	Use more blocks.	Use fewer blocks.
		
3 tens 14 ones	2 tens 24 ones	4 tens 4 ones

Show How Many

1. a. How many? ☐



b. ☐ tens ☐ ones

2. Use more blocks.

☐ tens ☐ ones

3. Use fewer blocks.

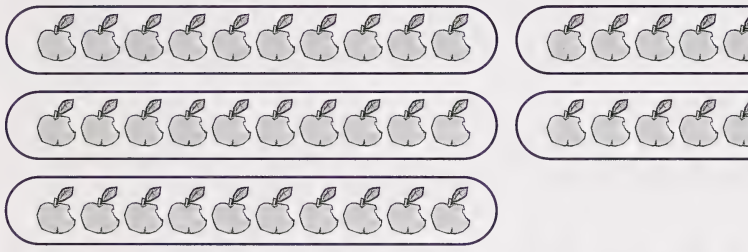
☐ tens ☐ ones

Show How Many

Lesson 2

Both Elena and Jasper decided they wanted to draw things other than blocks. This is what they drew.

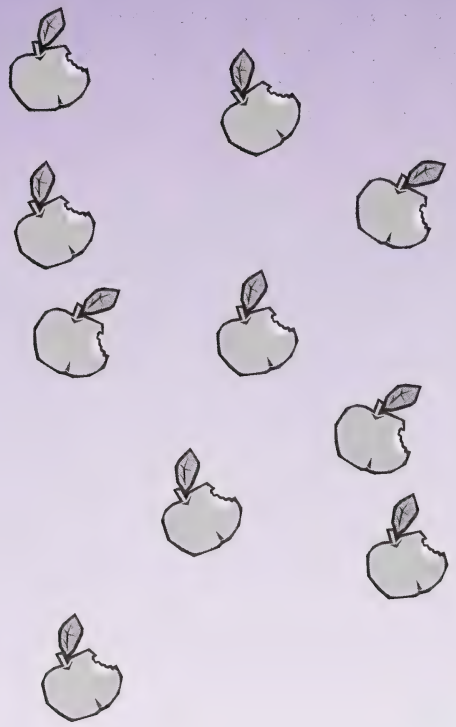
How many? 66



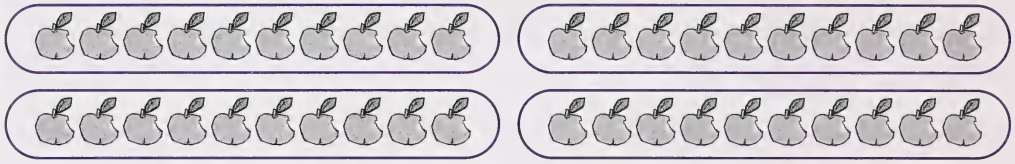
5 tens 16 ones

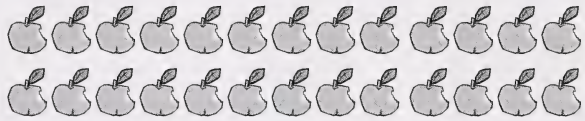
Then they built and drew the same number using more and fewer groups of apples.

Review with the student how things other than blocks can be grouped in ten. Use a manipulative if the student requires further guidance with this concept.



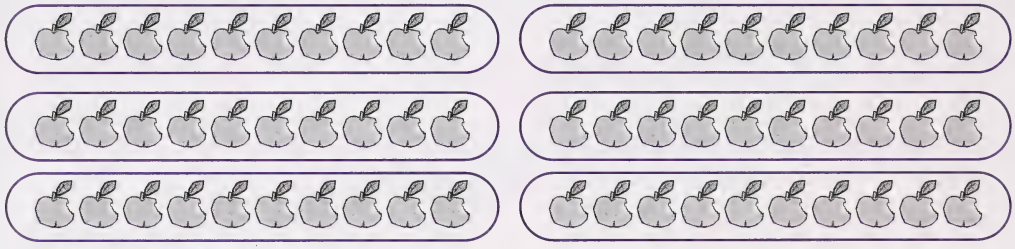
Use fewer groups of apples.





4 tens 26 ones

Use more groups of apples.



6 tens 6 ones

Show How Many

1. Build and draw the numbers using more and fewer groups of stars.

Help the student as required.

a. How many? ☐

b. ☐ tens ☐ ones

c. Use fewer groups of stars.

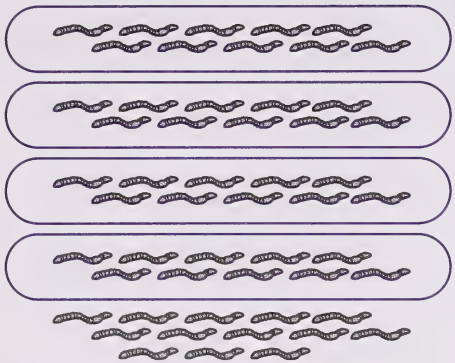
☐ tens ☐ ones

d. Use more groups of stars.

☐ tens ☐ ones

2. Now build and draw the numbers using more and fewer groups of worms.

a. How many? ☐



b. ☐ tens ☐ ones

c. Use more groups of worms.

☐ tens ☐ ones

d. Use fewer groups of worms.

☐ tens ☐ ones

For more practice with place value, go to the Extension Activities.

Go to Assignment Booklet 2B.

Day 11: How High? How Long?

Do you know how tall you are?

How many cubes do you think it would take to measure yourself?

Today, you will estimate a measurement. Then you will find the actual measurement.

Lesson 1

Elena and Jasper thought it would be fun to measure how tall they were using interlocking cubes. Before they measured each other, they estimated how many cubes it would take to match their height.

Take out your interlocking cubes from your Math Box and spread them on the floor.

Look at your interlocking cubes. How many of them, linked in a train, do you think it would take to match your height?

My estimate is ☐ cubes.

How High? How Long?

Now put the cubes together and add or take away as many as you need until they match your height.

Do you have a train of cubes matching your height? Once you do, count them.

How many cubes did it take to match your height? ☐

Is this greater or fewer than your estimate?

_____

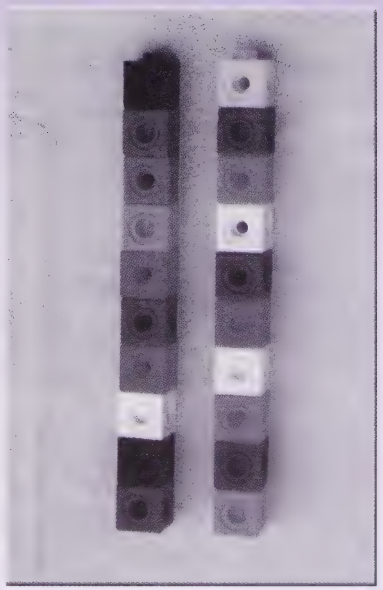
Was your estimate a good estimate?

Circle Yes or No.

Lesson 2

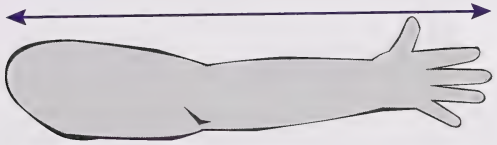
Elena and Jasper found that their estimates for matching the cubes to their height were not good estimates. They decided to practise estimating with the interlocking cubes.

Assist the student with the measuring.

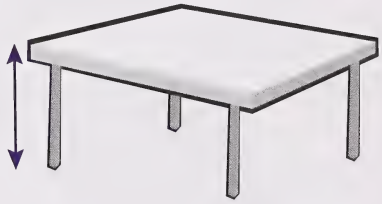


These are some of the things they estimated in cubes.

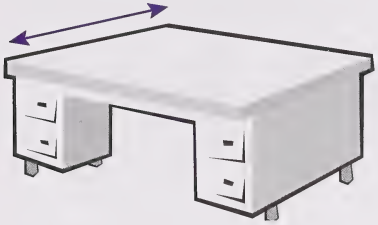
- the length of an arm



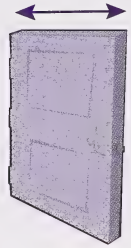
- the height of a table



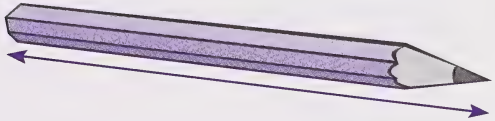
- the width of a desk



- the width of a door



- the length of a pencil



Now it's your turn to estimate how many cubes it will take to measure these items.

Estimate the length of your arm in interlocking cubes. ☐

Estimate the height of a table in interlocking cubes. ☐

Estimate the width of your desk in interlocking cubes. ☐

Estimate the width of a door in interlocking cubes. ☐

Estimate the length of your pencil in interlocking cubes. ☐

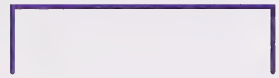
When you have finished estimating, build the cubes to match the actual measurement. Did you make good estimates?

Write in the actual number of cubes it took to match the following:

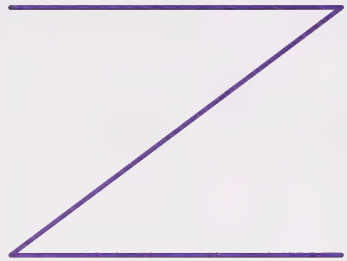
- the length of your arm ☐
- the height of your table ☐
- the width of a door ☐
- the width of your desk ☐
- the length of your pencil ☐

Estimate how many cubes will fit along each of the following lines.

My estimate is ☐. The actual number is ☐.

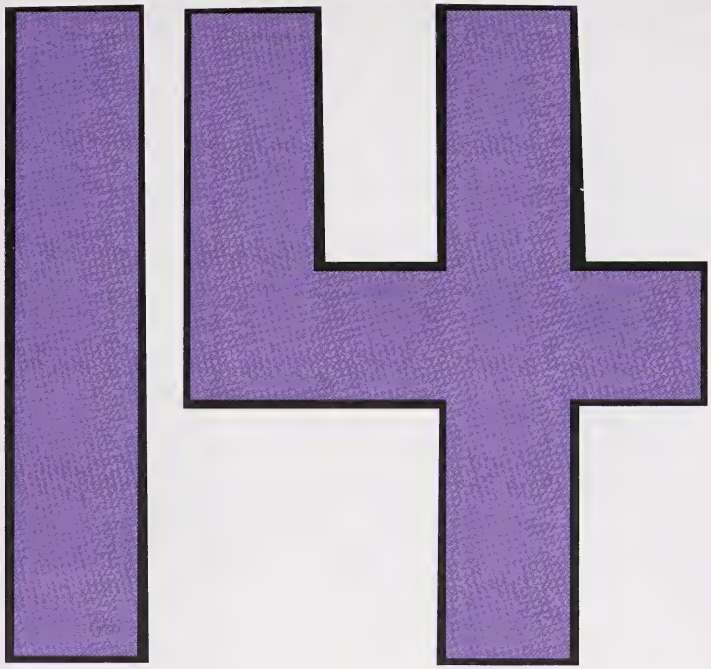


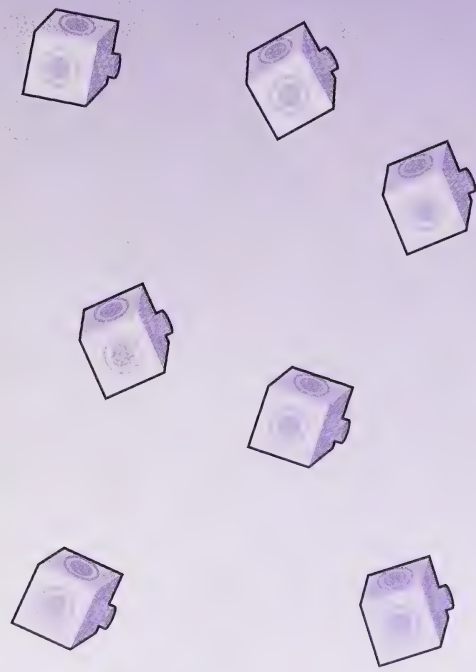
My estimate is ☐. The actual number is ☐.



My estimate is ☐. The actual number is ☐.

How High? How Long?



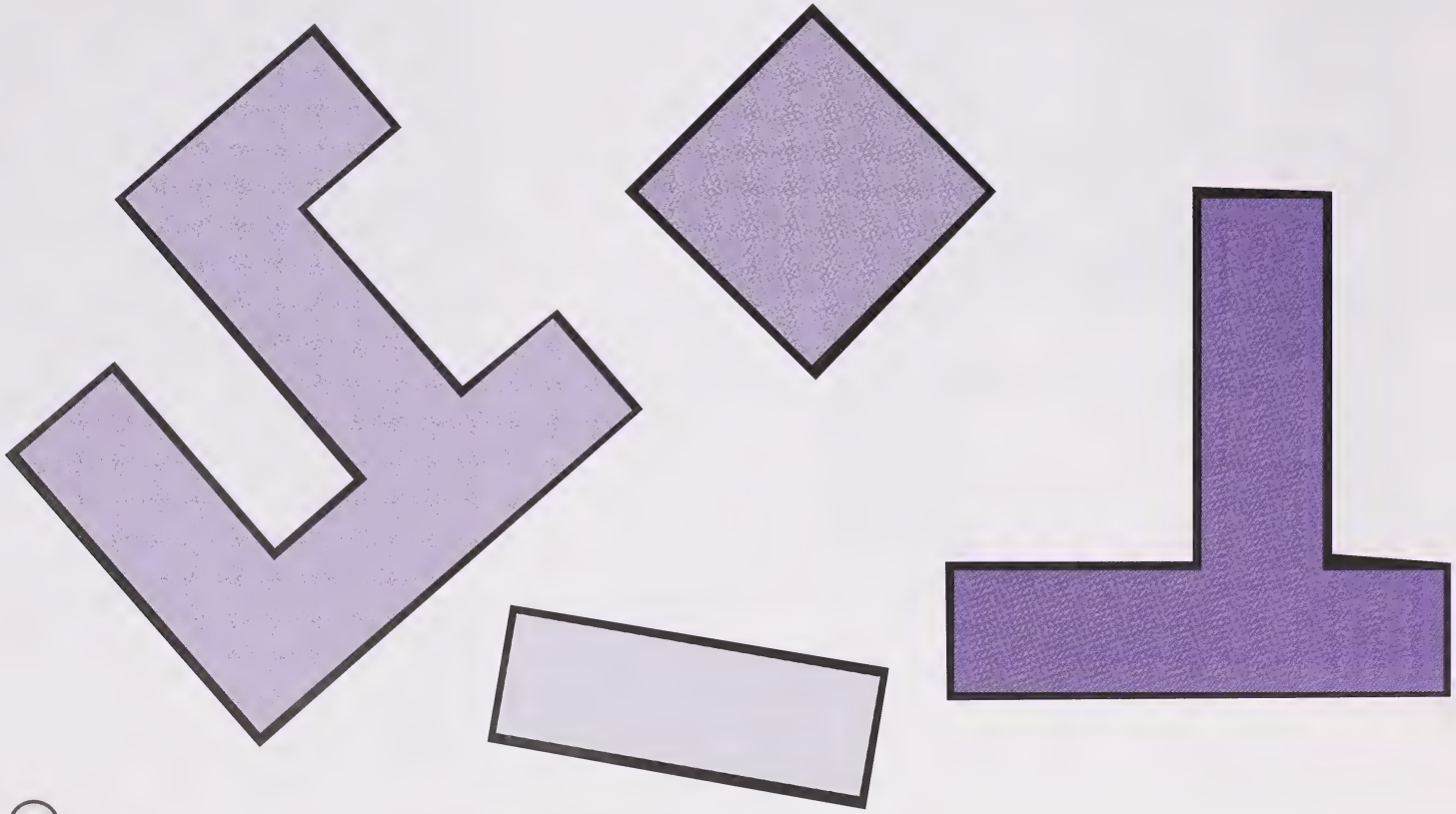


Estimate how many cubes will fit in the 14. ☐

Cover the number with cubes. How many cubes did you use? ☐

Was your estimate a good estimate? Circle Yes or No.

How many cubes do you think are needed to cover the shapes? After you make your estimate, cover the shapes with the cubes and count out the actual number.



For more practice estimating measurements, go to the Extension Activities.

Day 12: Round Them Up

Have you ever been on a ride at an amusement park? Sometimes the car quickly slides ahead to the bottom. Sometimes the car feels like it may slide backward.

Estimating numbers is like that, too. Numbers can be large enough to be rounded up or small enough to be rounded down.

Today you will work with rounding numbers.

Lesson 1

Read the text with the student.

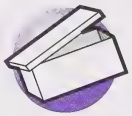
Elena's birthday was coming. She and Jasper were helping Elena's mother plan her party. Elena and Jasper made a list of 11 friends to invite. Elena's mother added Jasper and Elena to the list. She knew she needed 13 balloons in all. The packages of balloons held either 10 balloons or 15 balloons. Which package should she buy?

Explain to the student that people sometimes round numbers to make them easier to use. See the Home Instructor's Guide for further instruction.

What do you think?

Elena knows that sometimes it's easier to say or remember a number if it's rounded. Elena's mother rounded the number of guests to 15. Then she knew which package of balloons to buy.

Elena and Jasper wanted to try rounding numbers, too. They decided to use their base ten blocks.



Take your base ten blocks out of your Math Box.

Place 3 rods and 1 cube on the student's desk.

Look at the base ten blocks your home instructor placed on your desk.

Round Them Up

Is the number more than 30? Circle Yes or No.

Is the number more than 40? Circle Yes or No.

Is the number closer to 30 or closer to 40? ☐

What is the actual number? ☐

What is the nearest ten to it? ☐

So, 31 is rounded to 30 because it is closer to 30 than to 40.

A number is rounded by bringing it to its nearest ten.

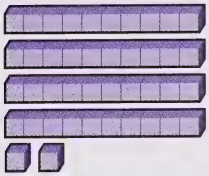
Review this concept with the student until it is understood.

Round Them Up

Day 12

Using the rods and cubes of your base ten blocks, build these numbers.

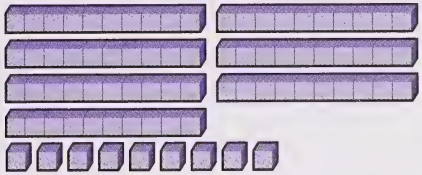
1. 42



a. Is this closer to 40 or to 50? ☐

b. Round 42 to the nearest 10. ☐

2. 79



a. Is this closer to 70 or to 80? ☐

b. Round 79 to the nearest 10. ☐

3. 64

a. Is this closer to 60 or to 70? ☐

b. Round 64 to the nearest 10. ☐

4. 98

a. Is this closer to 90 or to 100? ☐

b. Round 98 to the nearest 10. ☐

5. 87

a. Is this closer to 80 or to 90? ☐

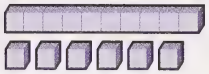
b. Round 87 to the nearest 10. ☐

6. 53

a. Is this closer to 50 or to 60? ☐

b. Round 53 to the nearest 10. ☐

7. 16



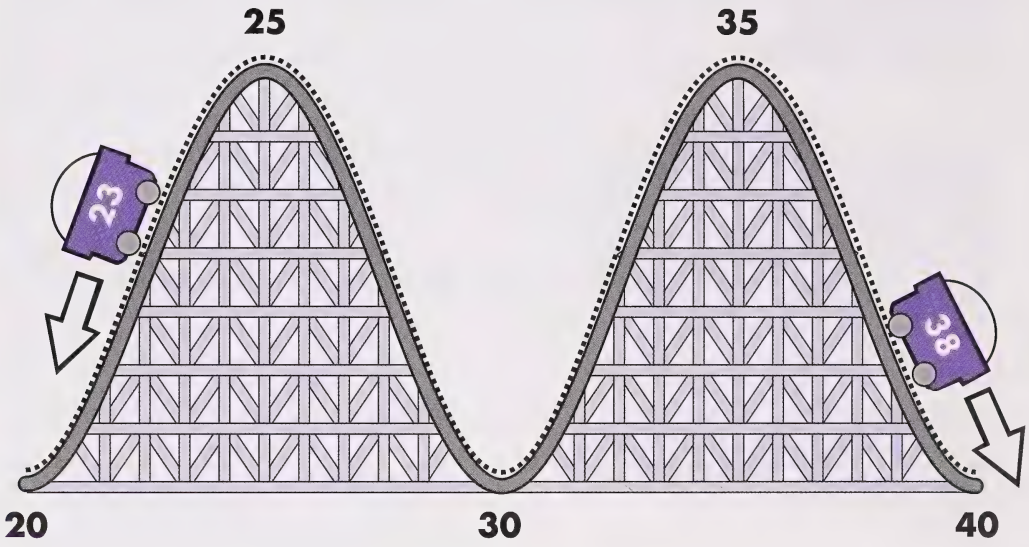
a. Is this closer to 10 or to 20? ☐

b. Round 16 to the nearest 10. ☐

Explain to the student that rounding numbers is like the cars sliding down to the nearest number.

Lesson 2

Think of rounding numbers this way. This is a number line that looks like a roller coaster with cars on it.



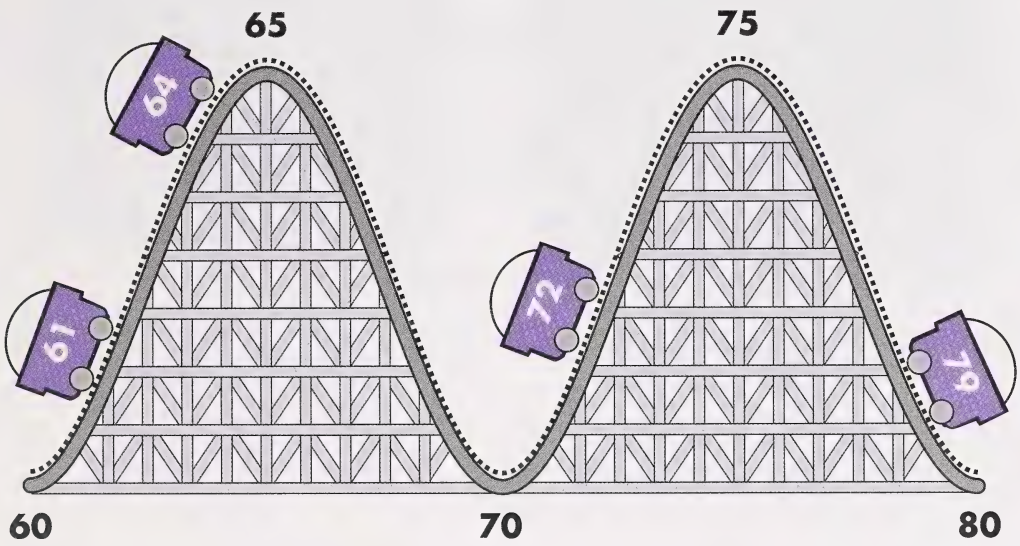
The actual number of the first car is 23. You can see it slide down to the nearest ten. The nearest ten is 20.

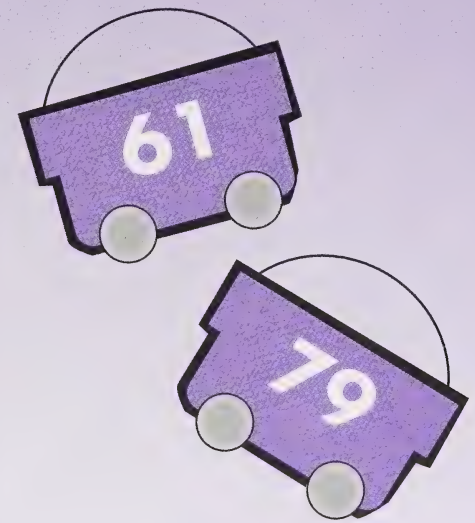
The actual number of the second car is 38. You can see it slide down to the nearest ten. The nearest ten is 40.

Round Them Up

Actual Number		Rounded Number
23	slides to	20
38	slides to	40

Use the roller coaster below to see which ten each car will slide to. Then fill in the chart that follows.





Round Them Up

1. Round these numbers to the nearest ten.

Actual Number		Rounded Number
61	slides to	
64	slides to	
72	slides to	
79	slides to	

2. What is the rule for rounding?

_____

_____

Round Them Up

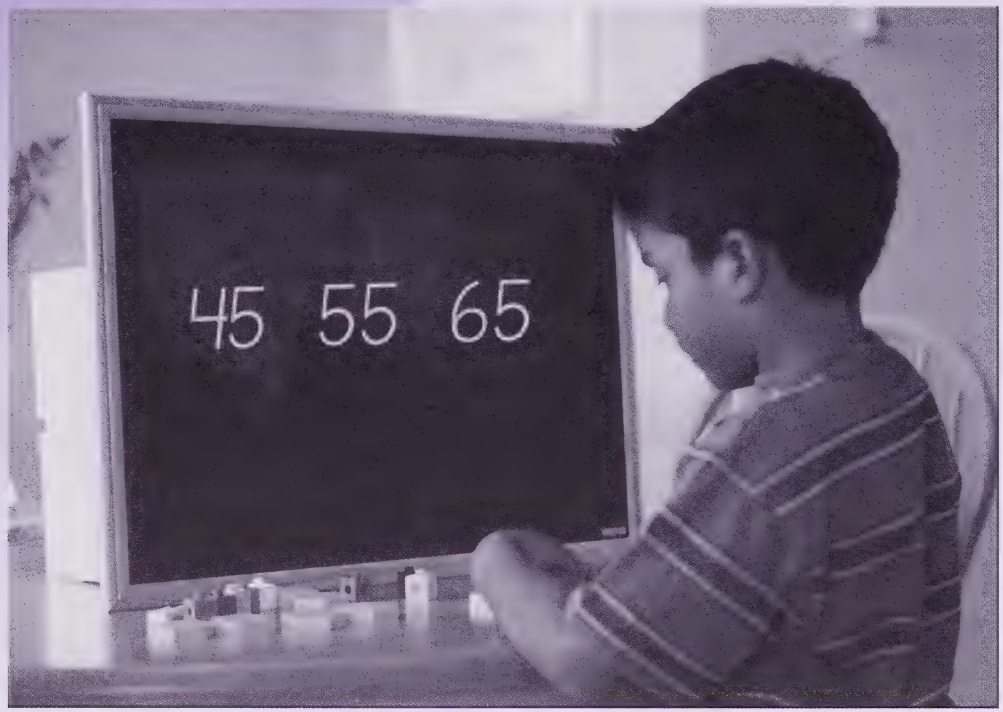
3. Round these numbers to the nearest ten. You may use your rods and cubes to help.

Number	Rounded To
53	
79	
81	
96	
44	
27	
32	

Number	Rounded To
18	
63	
76	
47	
82	
8	
99	

Go to Assignment Booklet 2B.

Day 13: Rounding Fives and More

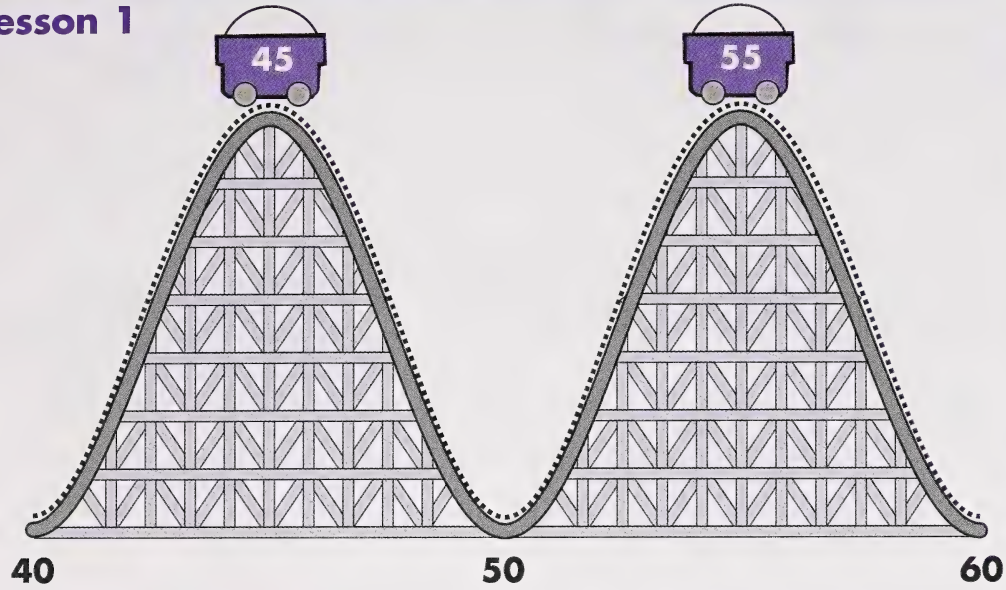


You know about rounding numbers from the last day. What do you do when the number has a 5 in the ones place?

Today, you will continue rounding numbers, especially ones with a 5 in the ones place.

Rounding Fives and More

Lesson 1



Elena and Jasper's teacher showed them this number line. They were stumped. They didn't know where these cars would slide to. Do you have any idea?

A number with 5 in the ones place will round to the larger ten.

Discuss any ideas the student may have. Then read the rule together. If the student has difficulty answering the questions, explain the rule until it is understood.

Knowing this rule, which 10 do you think the 45 will slide to? ☐ Which 10 will the 55 slide to? ☐

Take out your base ten rods and cubes from your Math Box.

The number on the first car is 45. Build it and then fill in the place-value chart.

Tens	Ones

Is there a 5 in the ones place? Circle

or

.

What is the next biggest ten after 45? ☐ The number 45 is rounded to ☐ because it has ☐ in the ones place.

The number on the second car is 55. Build it and then fill in the place-value chart.

Tens	Ones

Is there a 5 in the ones place? Circle

or

.

What is the next biggest ten after 55? ☐

The number 55 is rounded to ☐ because it has ☐ in the ones place.

The actual number of the first car is 45. It will slide to the bigger ten. The next bigger ten is 50.
45 rounds to 50

The actual number of the second car is 55. It will slide to the bigger ten. The next bigger ten is 60.
55 rounds to 60

Actual Number		Rounded Number
45	slides to	50
55	slides to	60

Lesson 2

1. What is the rule for rounding a number with a 5 in the ones place? _____

_____

2. Round the numbers to the nearest 5.

Actual Number		Rounded Number
35	slides to	
75	slides to	
95	slides to	

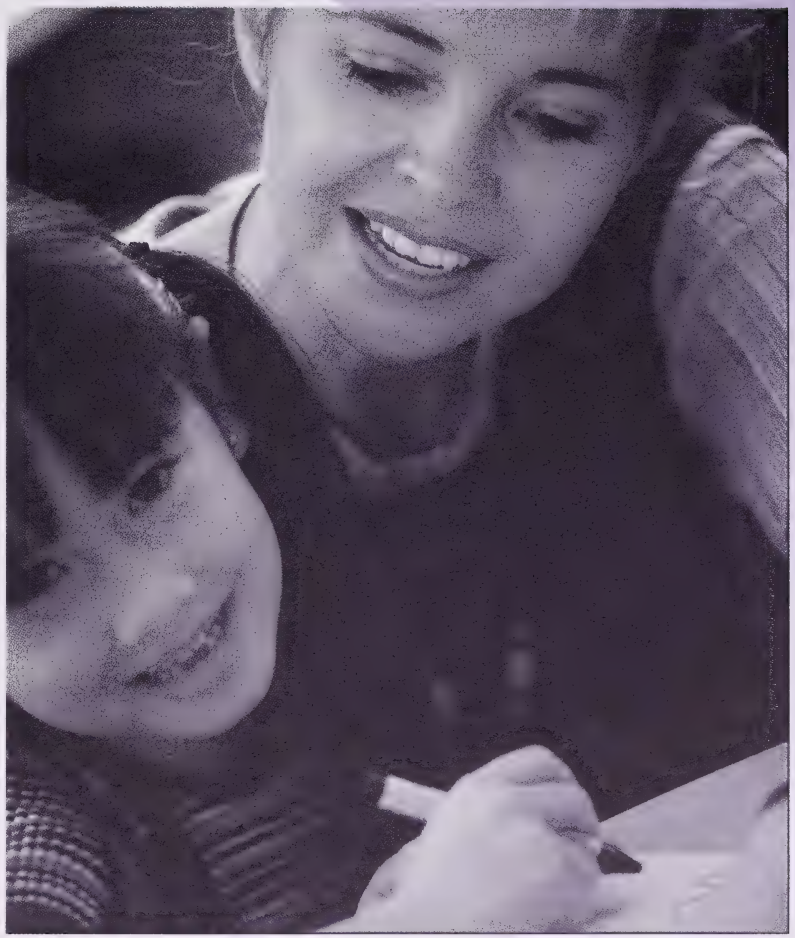
For more practice rounding numbers, go to the Extension Activities.

Go to Assignment Booklet 2B.

Day 14: A Sense of Number

You have learned many new things about numbers so far.

Today, you will have a chance to show just how much you know about numbers.



Lesson 1

Elena and Jasper thought this was a good time to review a few things about numbers. Elena pretended she was the teacher and Jasper was her student.

Elena showed Jasper some beans. Your home instructor will do the same thing.

Put four beans on a piece of paper, cover them, and allow the student to see them for two seconds before covering them again. See the Home Instructor's Guide for further instruction.

How many beans did you see? ☐ Count them.

Your home instructor will change the beans now. Look at the new beans.

How many beans did you see this time? ☐ Count them.

Your home instructor will change the beans again. Look at the new beans.

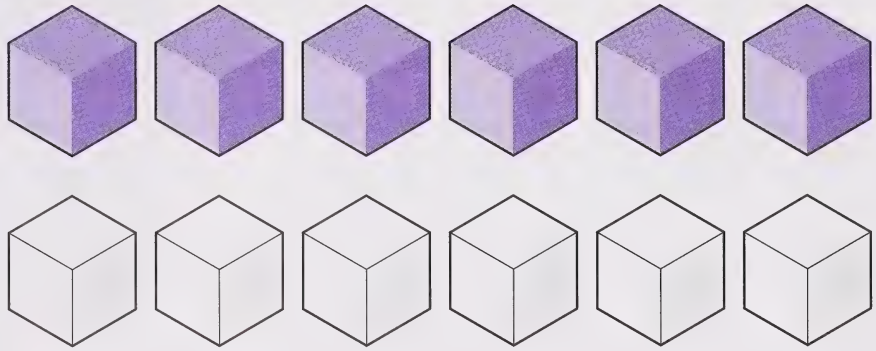
How many beans did you see this time? ☐ Count them.

Jasper thought this last one was tricky. He thought there were six beans this time. Why do you think he thought that?

Jasper saw that although the number of beans was the same, the pattern was different, which made it look like there were more beans. He knows, though, that there are the same number of beans in the second and third activity.

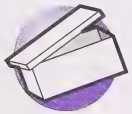
Lesson 2

Jasper thought the following was a trick question, too.



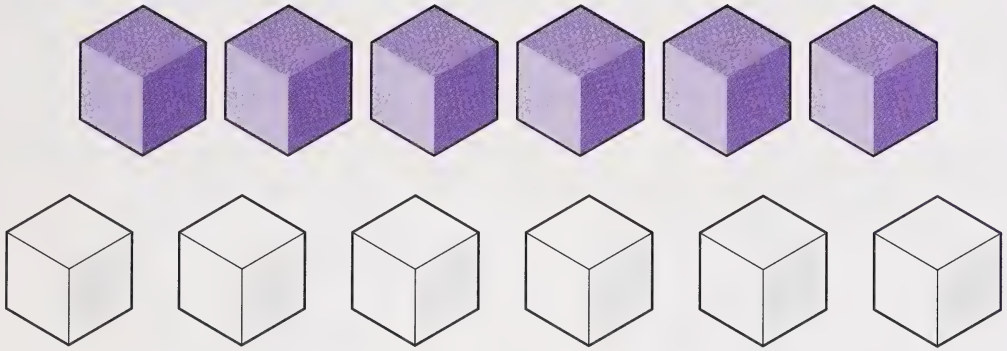
How many purple blocks are there? ☐ How many white blocks are there? ☐

Are there more purple blocks than white blocks? Circle yes or no.



Take out your cubes from your Math Box.

Arrange the cubes to look like the ones on this page. Choose six of one colour and six of another colour.



How many purple blocks are there now? ☐

How many white blocks are there now? ☐

Are there more purple blocks or more white blocks?

_____

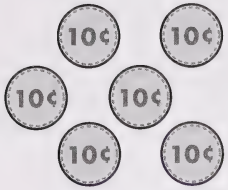
_____

Read the Home Instructor's Guide for directions.

Have the student practise this concept with the blocks. Practise with different numbers and colours. Ensure the same number is always used when making the two rows.

Lesson 3

Look at these dimes.



Group A

Group B

Group C

Without counting, which group do you think has the most dimes?

_____

Why?

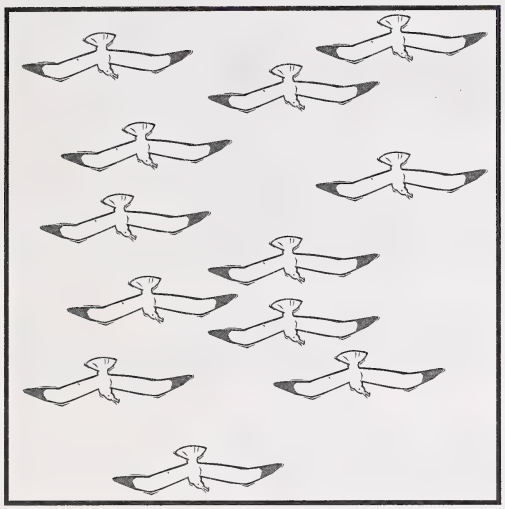
Count the dimes in Group A. ☐ Count the dimes in Group B. ☐ Count the dimes in Group C. ☐

Which group has the most dimes? _____

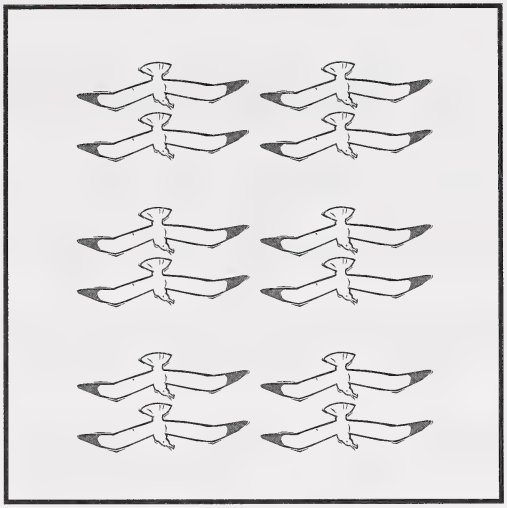
Lesson 4

Look at the pictures of the seagulls.

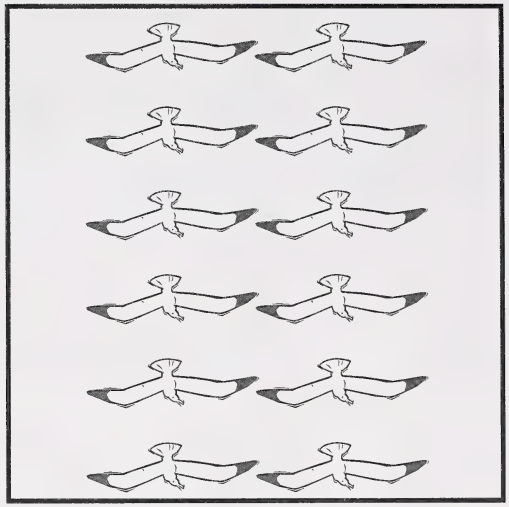
Box A



Box B



Box C



Which box do you think has the greatest number of birds? ☐

Count the seagulls in each box.

Box A has ☐. Box B has ☐. Box C has ☐.

The student should say that all the boxes have the same number of birds. It is the pattern of each that makes it look as if there are more or fewer in each box.

Is there a box that has a greater number of seagulls?

Circle Yes or No.

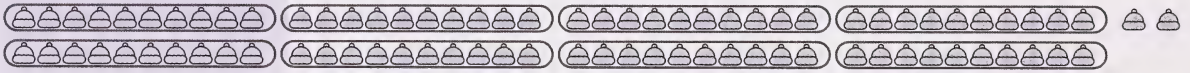
Is there a box that has less seagulls? Circle Yes or No.

Did you guess correctly? Circle Yes or No.

Why do you think that was?

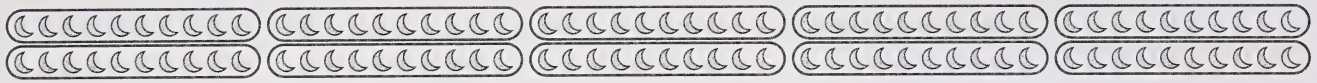
Count the sets of objects and print the number beside them.

1.

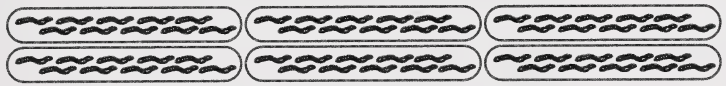
2. 

3.

4.

5. 

6.

7. 

8.

9.

10.

11. Which set has the greatest amount of objects?

_____

12. Which set has the least amount of objects?

_____

Day 15: Easy Counting

How many stars are in this picture? Can you think of an easy way to count them?

What could you do to make counting large numbers easier?

Today you will work with grouping objects to count them. You will also work with models of numbers.

Lesson 1

What did you do to make counting large numbers easier?

To make counting large numbers easier, I _____

_____

_____

The student should write that grouping the objects into tens makes counting easier. Remind the student that grouping objects allows for quick and accurate counting.

Grouping by 10s makes counting easier, because you know how to count by 10s. Count by 10s to 100. Then write the numbers in the boxes.

Guide the student into realizing that you can group objects by any amount, but that it is easier to do with numbers that can be easily skip counted, such as 2s, 5s, and 10s. To reinforce this concept, the student will group objects into 7s and 8s.

☐, ☐, ☐, ☐, ☐, ☐, ☐, ☐, ☐, ☐

You can group objects into 2s or 5s. Skip count by 2s to 50 now. Was that easy?

Count by 5s to 100. Was that easy?

Now try counting by 7s and 8s to 100. How easy was that?

Lesson 2

Take out a jar of coins or pasta from your Math Box.

Spill the contents of the jar onto your desk.

Group the objects you chose into sets of **5**. Make **10** sets of 5.

Point to each set as you count it.

How many objects do you have? ☐

Was this easy to count? Circle Yes or No.

Why or why not? _____

_____

Now group the objects into sets of **7**. Make **8** sets of 7.

Easy Counting

Point to each set as you count by 7 until you count all 8 sets.

Did you count all the groups or did you give up?

Was it difficult to count by 7? Circle

or

.

Why do you think that is? _____

_____

Now group the same objects into sets of 10. Make **8** sets of 10.

Point to each set as you count by 10s.

What is the number? ☐

Is it easier to count by 10s than by 7s?

Circle

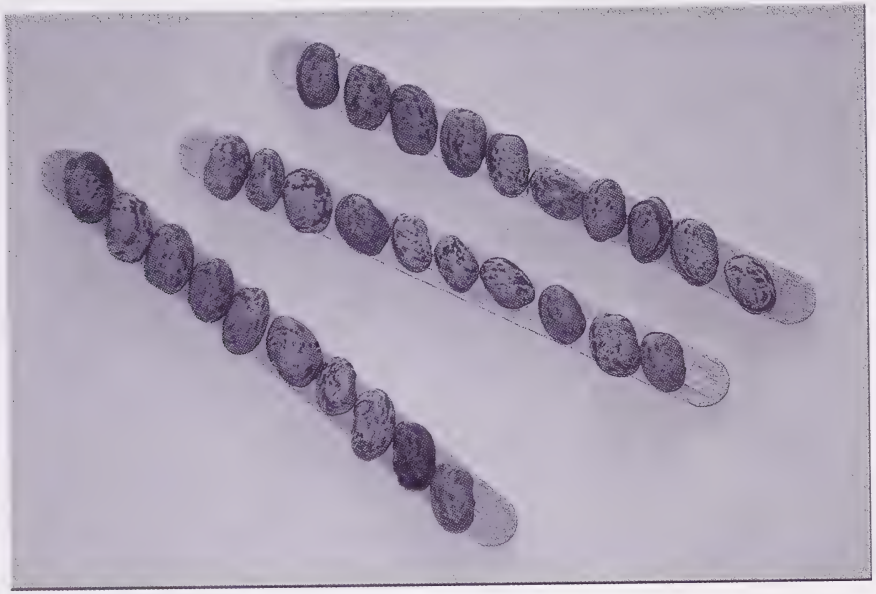
or

. Why or why not?

The student should find that counting by 5s and 10s was easier than counting by 7s because he or she is not familiar with counting by 7s.

Lesson 3

Take your bean sticks and jar of beans out of your Math Box.



Build models of these numbers.

34 94 59

Arrange the models in order from the greatest to the least.

1. What is the order you put them in? ☐, ☐, ☐

Arrange the models in order from the least to the greatest.

2. What is the order you put them in now? ☐, ☐, ☐

Build models of these numbers.

twenty eleven sixteen

Arrange the models in order from the greatest to the least.

3. What is the order you put them in? Print the number words on the lines.

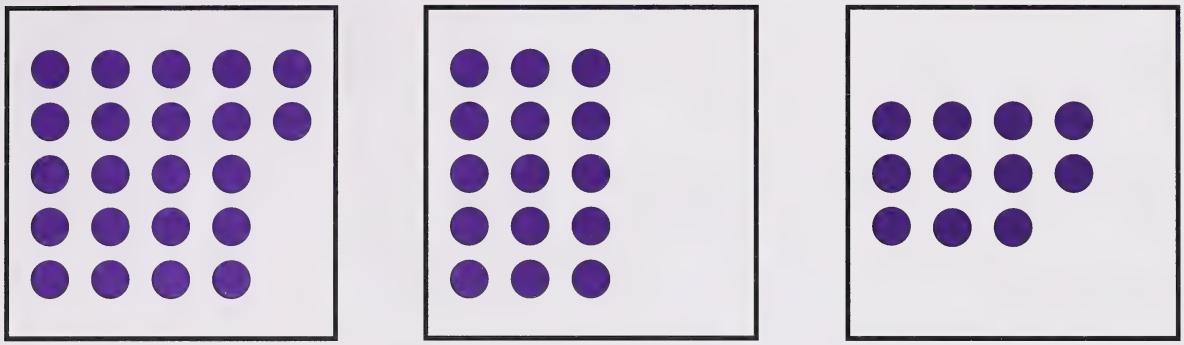
_____, _____, _____

Arrange the models in order from the least to the greatest.

4. What is the order you put them in now?

_____, _____, _____

Build models of these numbers.



Arrange the models in order from the greatest to the least.

5. What is the order you put them in? ☐, ☐, ☐

Arrange the models in order from the least to the greatest.

6. What is the order you put them in now? ☐, ☐, ☐

7. Practise building models with these numbers. Then print the number.

a. 10 fewer than 60 is ☐

b. 4 more than 15 is ☐

c. 2 more than 73 is ☐

d. 5 fewer than 89 is ☐

e. 10 more than 82 is ☐

f. 2 more than 37 is ☐

g. 10 fewer than 100 is ☐

h. 5 more than 91 is ☐

i. 1 more than 40 is ☐

j. 10 more than 37 is ☐

For more practice building sets and rounding to ten, go to the Extension Activities.

Go to Assignment Booklet 2B.

Assist the student with these if necessary. Suggest that the student build the number first and then add or take away the number specified.

Day 16: How Are They Alike? How Are They Different?

12 21 32

How are these numbers alike? How are they different?

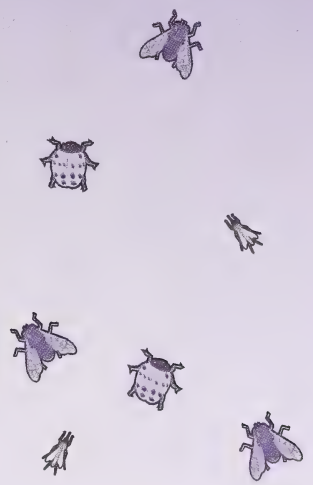
Today you will look at numbers that are alike and are different. You will build models to help you. You will also describe how numbers are alike and how they are different.

Lesson 1

Choose a place-value model from your Math Box.

Remind the student that base tens, bean sticks, and cubes linked into tens are called *place-value models.*

Jasper and Elena slapped 78 mosquitoes off their arms and legs one night last summer when they visited their friends in Slave Lake. That same day, they caught 81 flies and 72 ladybugs. They let the flies and ladybugs go after they counted them.



Build a model of the numbers of insects with your place-value models.

Put them in order from the greatest to the least number.

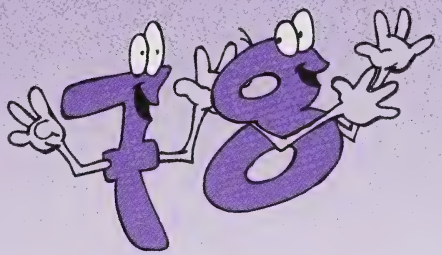
1. What is the order you put them in? ☐, ☐, ☐

Put them in order from the least to the greatest number.

2. What is the order? ☐, ☐, ☐

How Are They Alike? How Are They Different?

The student should say that 78 and 72 both have 7 tens. They are different because all the ones are different.



Look at the models. Is there anything the same about them? What is it?

_____

_____

Is there anything that is different about the models?

_____

_____

Build a model of these numbers with your place-value models. Then print the number.

10 fewer than 83 ☐

5 more than 62 ☐

10 more than 77 ☐

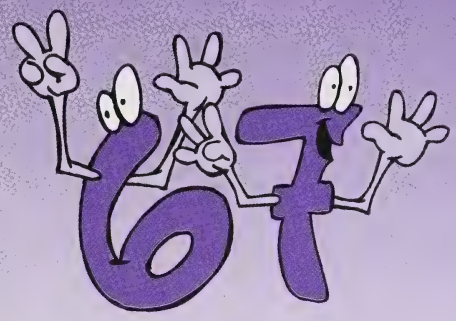
Now put them in order from the greatest to the least number.

How Are They Alike? How Are They Different?

3. What is the order you put them in? ☐, ☐, ☐

Put them in order from the least to the greatest number.

4. What is the order? ☐, ☐, ☐



Look at the models. Is there anything the same about them? What is it?

The student should recognize that 67 and 87 each have 7 ones.

What is different about the models?

They all have a different number of tens.

Guide the student to realize that 64 and 46 have the same digits but in reverse order. The difference is that one has 6 as a ten and the other has 4 as a ten. The ones are reversed, too.

Lesson 2

Take out a set of objects, such as bingo chips, dried peas, pasta, or coins, from your Math Box.

Using your objects, build sets of these numbers.

64 88 46

Now put them in order from the greatest to the least number.

1. What is the order you put them in?

☐, ☐, ☐

Put them in order from the least to the greatest number.

2. What is the order?

☐, ☐, ☐

How Are They Alike? How Are They Different?

Look at the models. Is there anything the same about them? What is it?

_____

_____

What is different about the models?

_____

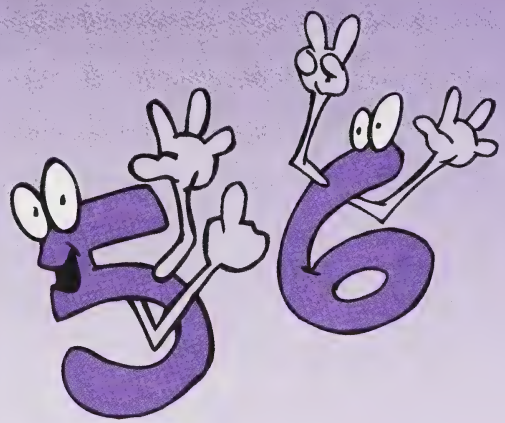
_____

How can you sort the items in each group to show tens and ones?

_____

_____

Sort the items in each group.



The student should know to sort the items into groups of ten.

Using the same or different items, build sets of these numbers.

91 19 79

Now put them in order from the greatest to the least number.

3. What is the order you put them in? ☐, ☐, ☐

Put them in order from the least to the greatest number.

4. What is the order? ☐, ☐, ☐

Look at the models. Is there anything the same about them? What is it?

How Are They Alike? How Are They Different

What is different about the models?

_____

_____

How can you sort the items in each group to show tens and ones?

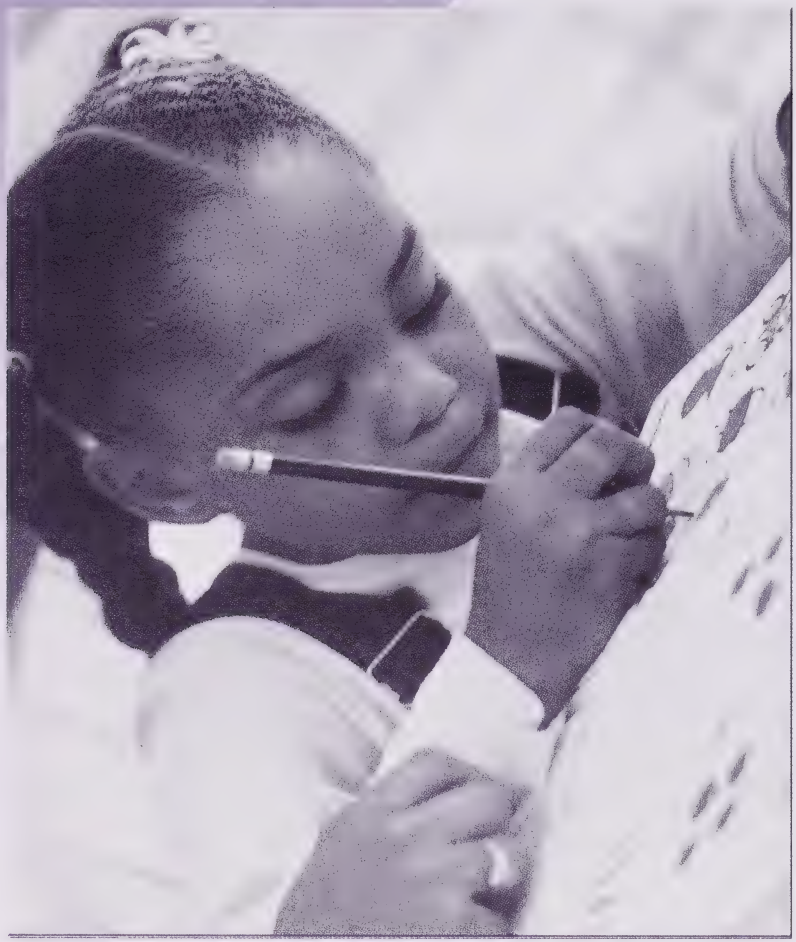
_____

_____

Sort the items in each group.

If you have time, play the card games in the Extension Activities.

Day 17: What Do the Numbers Mean?



When you look at a number, do you know what it means?

You have learned many things about numbers in this module. Today you will use what you know to show what numbers mean.

What Do the Numbers Mean?

Lesson 1

You now know how to build sets, how to order numbers (from least to greatest, or greatest to least), and you know how to sort. Do you know what each number stands for in a number?

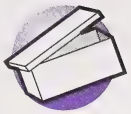
What does the **5** in 51 mean?

Guide the student to answer that **5** and **1** stand for tens and ones.

_____

What does the **1** mean?

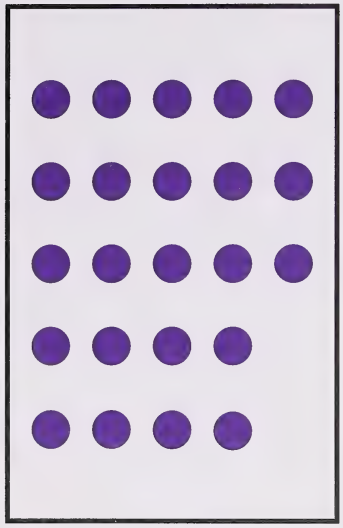
_____



Take out a set of objects from your Math Box.

What Do the Numbers Mean?

Using the objects, build a set to match each card.

Set A	Set B	Set C
	32	ten fewer than 51

Arrange the manipulatives so it is easy to count the total in each set.

Show the number on the place-value chart.

Tens	Ones

What Do the Numbers Mean?

Which set has the most items? _____

How do you know?

_____

_____

Try these.

What does the **7** in 75 stand for?

_____

What does the **5** stand for?

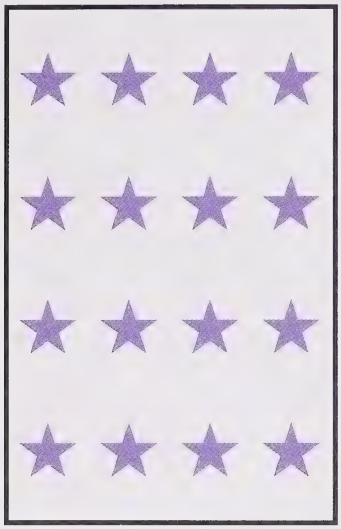
_____

Set C has the most items because 41 has 4 tens, where the other two have 2 and 3 tens.

What Do the Numbers Mean?

Build a set to match each card.

Set A



Set B

24

Set C

ten more than 75

Arrange the objects so it is easy to count the total in each set.

Show the number on the place-value chart.

Tens	Ones

What Do the Numbers Mean?

Which set has the most items? _____

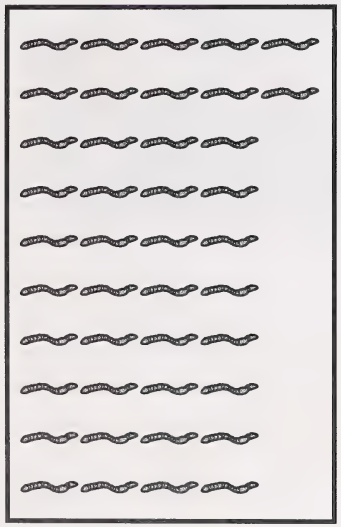
How do you know?

_____

_____

Build a set to match each card.

Set A



Set B

eighteen

Set C

ten fewer than 93

What Do the Numbers Mean?

What does the **9** in 93 stand for?

_____

What does the **3** stand for?

_____

Arrange the objects so it is easy to count the total in each set.

Show the number on the place-value chart.

Tens	Ones

Which set has the most items? _____

What Do the Numbers Mean?

How do you know?

_____

_____

Take out a set of objects from your Math Box.

Use your objects to make the set. Then show it on the place-value chart. Print the numbers in the boxes.

1. 92

Tens	Ones

a. ☐ tens ☐ ones

b. ☐

c. What does the **9** stand for?

_____

d. What does the **2** stand for?

_____

2. 10 greater than 63

Tens	Ones

a. ☐ tens ☐ ones

b. ☐

c. What does the **7** stand for?

_____

d. What does the **3** stand for?

_____

3. 10 fewer than 78

a. ☐ tens ☐ ones

b. ☐

c. What does the **6** stand for?

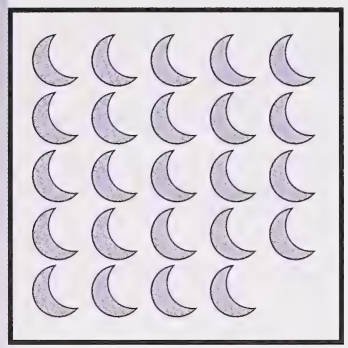
_____

d. What does the **8** stand for?

_____

Lesson 2

Jasper gave Elena these number cards. He told her to put them in order from the least to the greatest number. The numbers under each card show the order Elena put them in. Check to make sure Elena numbered them correctly.

67		ten more than 82	73	25	sixteen	ten fewer than 70
5	3	7	6	2	1	4

Elena got two wrong: number two and three. Guide the student through this if necessary.

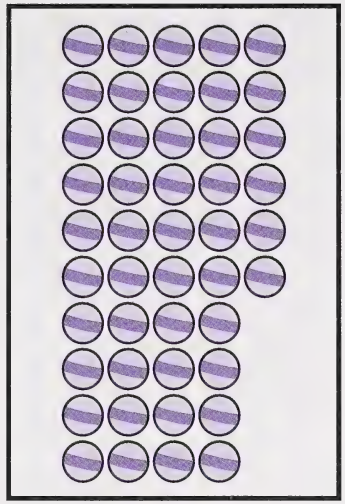
To check if Elena put the numbers in the correct order from the least to the greatest, write the numbers in the order Elena numbered them.

Did she number them correctly? Circle Yes or No.

What Do the Numbers Mean?

1. What is the correct order?

2. Now, put the numbers in order from the greatest to the least.

89	10 more than 71	83	10 fewer than 100		100	96

Go to Assignment Booklet 2B.

Day 18: What Do I Know Now?

Today is a review of Module 2. You have learned many things about working with big numbers.

Today you will estimate, work with tens and ones, round numbers, and put numbers in order.

What Do I Know Now?

This is a review of what you learned in this module. See how much you remember.

Choose from your Math Box two different-sized sets of objects to use.

Take two handfuls of one object.

Estimate how many you took. ☐

Count them. How many are there? ☐

How did you count them? _____

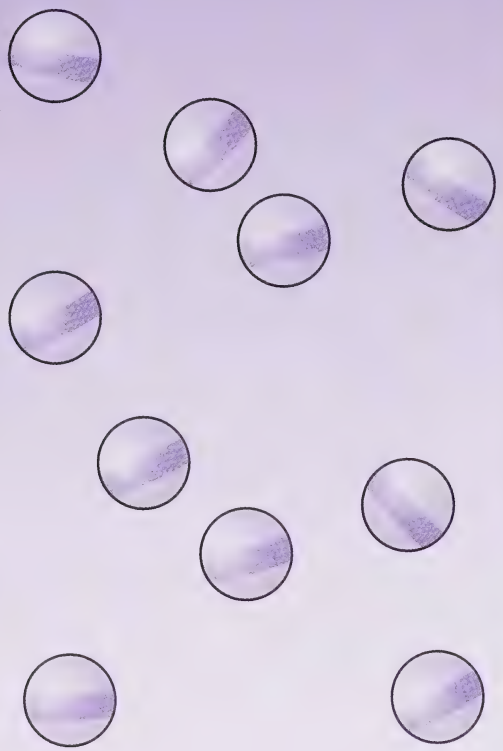
The student should say the items were grouped into tens.

Now take two handfuls of the other object.

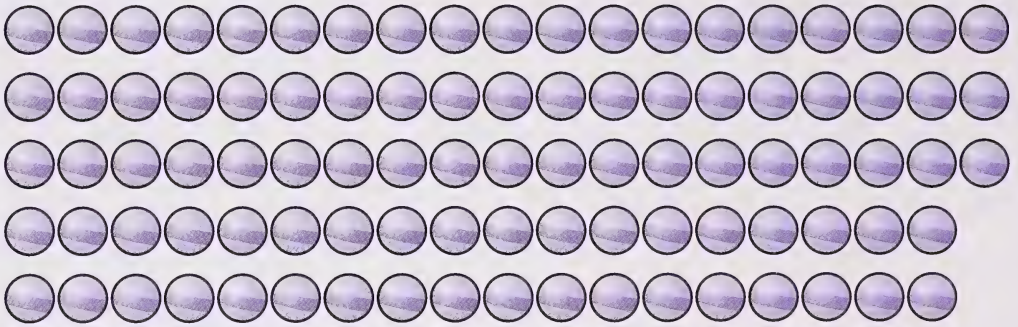
Estimate how many you took. ☐

Count them. How many are there? ☐

How did you count them? _____



Look at the following set of balls.



Estimate the number of balls.

My estimate ☐

Circle them into groups of ten. Then count them.

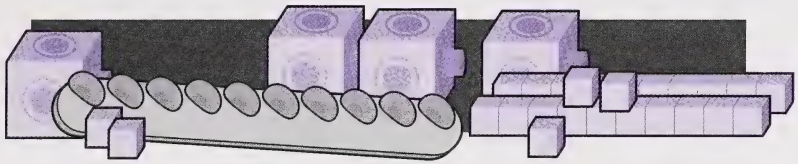
The actual number is ☐.

Tens	Ones

☐ tens ☐ ones

What Do I Know Now?

From your Math Box, take out your interlocking cubes, bean sticks, and base ten blocks.



Show the number of balls using your interlocking cubes.

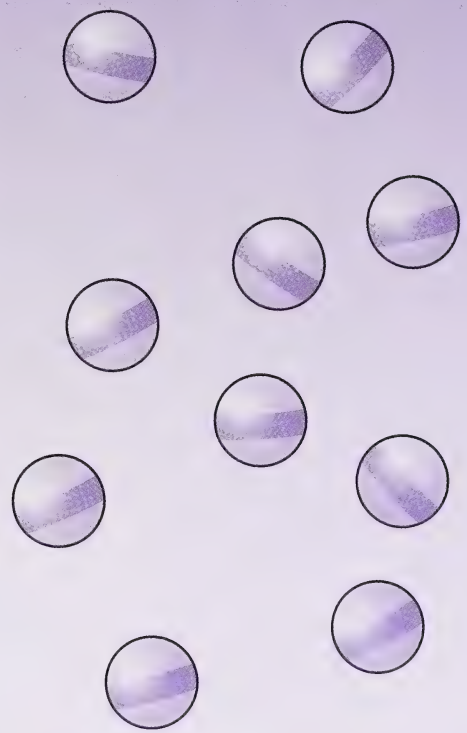
Show the number of balls using the base ten blocks.

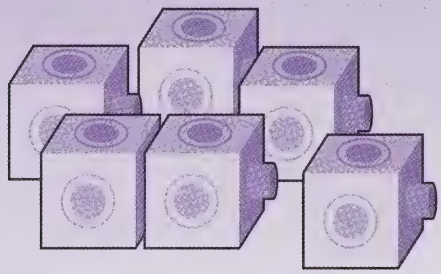
Show the number of balls using bean sticks.

Build and draw the number of balls using more bean sticks.

Take out your Place-Value Mat from your Student Folder.

The student shows the number 93 using interlocking cubes, base ten blocks, and bean sticks.





With your bean sticks and beans, show 98, 36, 51, 87, and 65 on your Place-Value Mat.

With your interlocking cubes, show 26.

With your bean sticks, show 83.

With your base ten blocks, show 62.

With your interlocking cubes, show 77.

With your base ten blocks, show 29.

With your bean sticks, show 100.

With your base ten blocks, build these numbers.

48 60 76 67

Build the same numbers using more blocks.

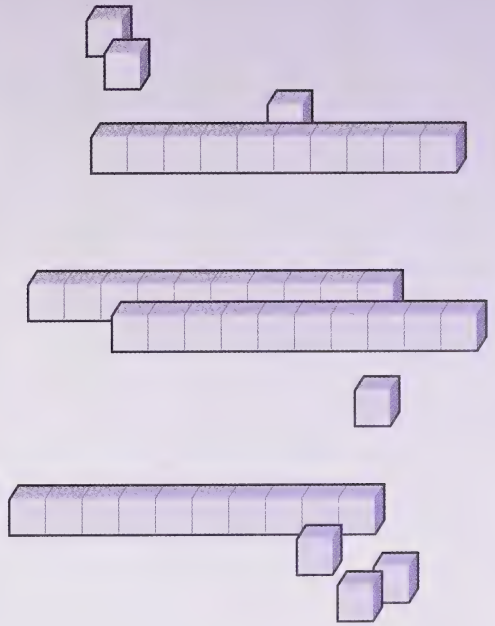
Now build the same numbers using fewer blocks.

What Do I Know Now?

1. Round these numbers to the nearest ten.

Number	Nearest Ten
89	
75	
62	
97	
46	
51	
34	

Take out a set of objects, such as bingo chips, dried peas, pasta, or coins, from your Math Box.



Using the set of objects, build sets of these numbers.

72 67 85 94

Put them in order from the greatest to the least number.

2. What is the order you put them in? ☐, ☐, ☐, ☐

Now put them in order from the least to the greatest number.

3. What is the order? ☐, ☐, ☐, ☐

4. What does the **9** in 91 stand for? _____

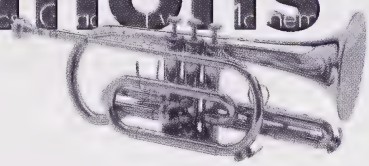
5. What does the **6** in 36 stand for? _____

Show the numbers 91 and 36 on the place-value charts.

Tens	Ones

Tens	Ones

Congratulations

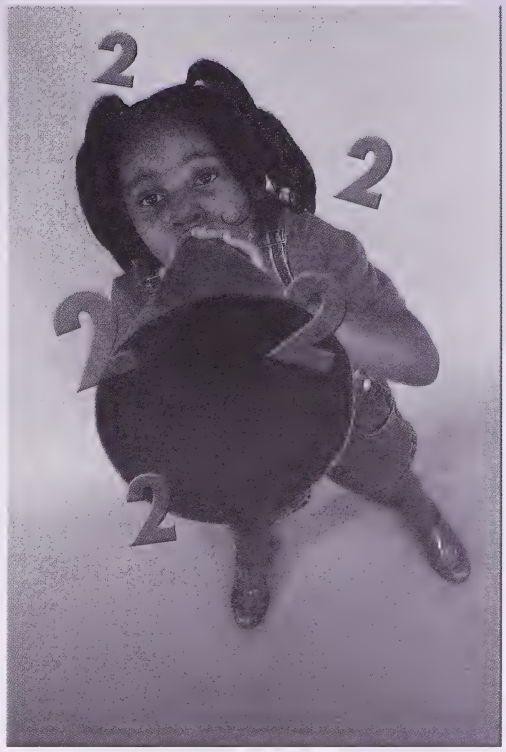


You have now completed Module 2: Working with Big Numbers. You looked at and used numbers in new ways.

These are the ways you learned to handle big numbers:

- estimating
- skip counting by fives and tens
- working with tens and ones
- working with place value
- using models to show numbers
- using more and fewer
- rounding numbers

What you have learned about numbers in Module 2 will help you in many ways. You will be able to estimate numbers and work with big numbers.



Extension Activities

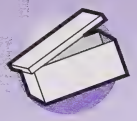
Day 1

Activity 1

				5					

Skip count by 5s to 100. Write in the numbers you get when you count by 5s. The first 5 is there for you.

Activity 2



Get the following items from your Math Box: snap cubes, buttons, pasta, dried beans, and your choice of a fifth item.

Take three handfuls of each item. Estimate how many of each you took. Count the items. Then check if your estimates were good ones.

Item	My Estimate	My Count	A Good Estimate
Snap Cubes			
Buttons			
Pasta			
Beans			
Your Choice			

Day 2

Activity 1

									10

Skip count by 10s to 100. Write in the numbers you get when you count by 10s. The first 10 is there for you.

Activity 2

Choose a set of objects.

Estimate how many objects will fill the rectangle. Then count the objects.

The object I used was _____.

My estimate ☐ The actual number is ☐.

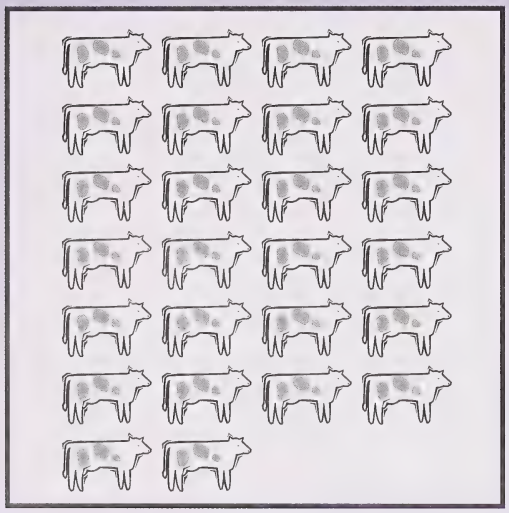
Was it a good estimate? Circle Yes or No.

How did you count? _____

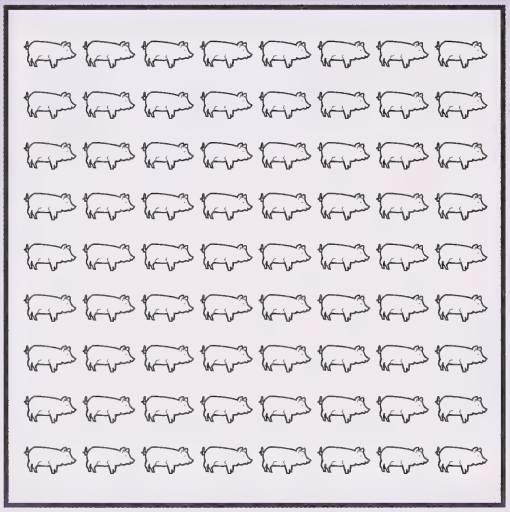
Day 4

Print your estimate of the items in each box. Then circle the tens in orange.

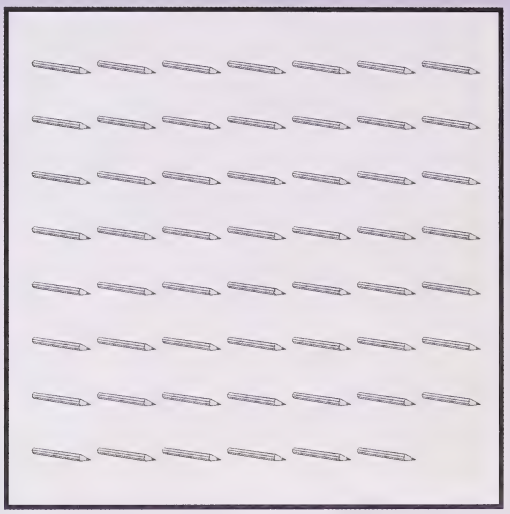
My estimate ☐



My estimate ☐



My estimate ☐

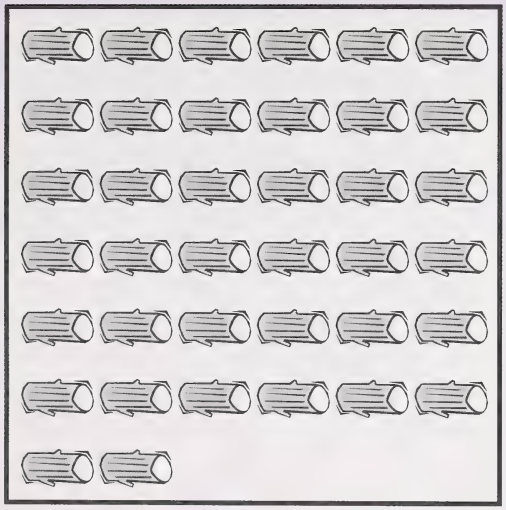


What is the actual number?

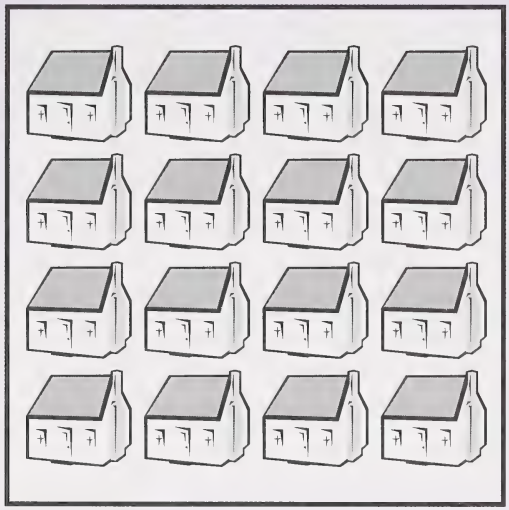
Is your estimate greater or fewer than the actual number?

Print your estimate of the items in each box. Then circle the tens in red.

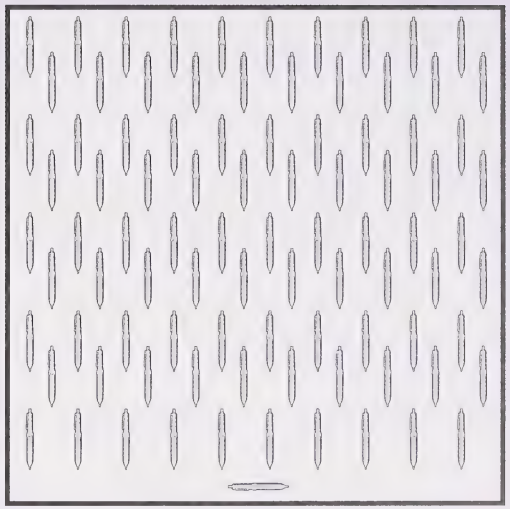
My estimate



My estimate



My estimate



What is the actual number?

Is your estimate greater or fewer than the actual number?

Days 6 to 10

(The following activities can be used on Days 6 to 10.)

Activity 1

Build the number your home instructor calls out. Name the number of tens and ones.

Then draw the number three different ways on your paper.

Put your drawings of the numbers in your Student Folder.

Activity 2

Play this game with your home instructor.

You will need wooden craft sticks, elastic bands, and a pair of dice from your Math Box.

You will need two Place-Value Mats, one for each player.

The first player rolls the die. The player shows the number rolled by placing sticks in the ones column on the Place-Value Mat. The second player then rolls the die and does the same. On the second throw, if the player's total number of sticks in the ones column makes ten or more, the sticks can be grouped in tens by an elastic band and placed in the tens column. The first player to have 100 sticks wins.

Day 11

Activity 1

You will need paper, a pencil, and cubes.

Return the paper to your Student Folder after you have completed the activity.

Extension Activities

Trace your foot on a piece of paper. Estimate the number of cubes that it will take to fill the footprint.

My estimate is ☐.

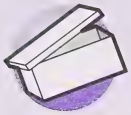
Cover the footprint with cubes and count out the actual number.

The actual number is ☐.

Activity 2

Find objects in your home that you want to measure with cubes. First, estimate the measurement in unifix cubes. Then build the cubes to match the measurement.

Day 13



Take out your cubes from your Math Box.

Go back to Lesson 1 of Day 11 and find out what your height is in cubes. What is it? ☐

Using that as a guide, estimate the height of your home instructor in cubes.

My estimate is ☐.

Now snap the cubes together and measure the height of your home instructor. Make each set of ten a different colour. This will make counting easier.

Find two other people to measure. You will be measuring their height in cubes.

On the chart, fill in their names and height in cubes. Put in your name and your home instructor's name as well. Round each person's height to the nearest ten.

Name	Height in Cubes	Height to Nearest Ten

Extension Activities

Day 15

Take out the Number Cards in the Appendix and your base ten rods and cubes from your Math Box.

Activity 1

Shuffle the Number Cards. Draw a card. Then use your rods and cubes to build sets that are 10 more and 10 fewer than the number on the card. Do this ten times.

Activity 2

Shuffle the Number Cards. Draw a card. Your home instructor will give you the rule to use. Then name the number. Keep the card if you are right. Discard it in a pile if you are wrong. You win if you have more cards in your hand than in the pile when all the cards are gone.

Day 16

Use the Number Cards to play War with your home instructor. You each lay down a card. The player with the greater number takes both cards. The player with the most cards at the end of the game wins.

Appendix

Image Credits
Number Spinner
Place-Value Mats
Number Cards

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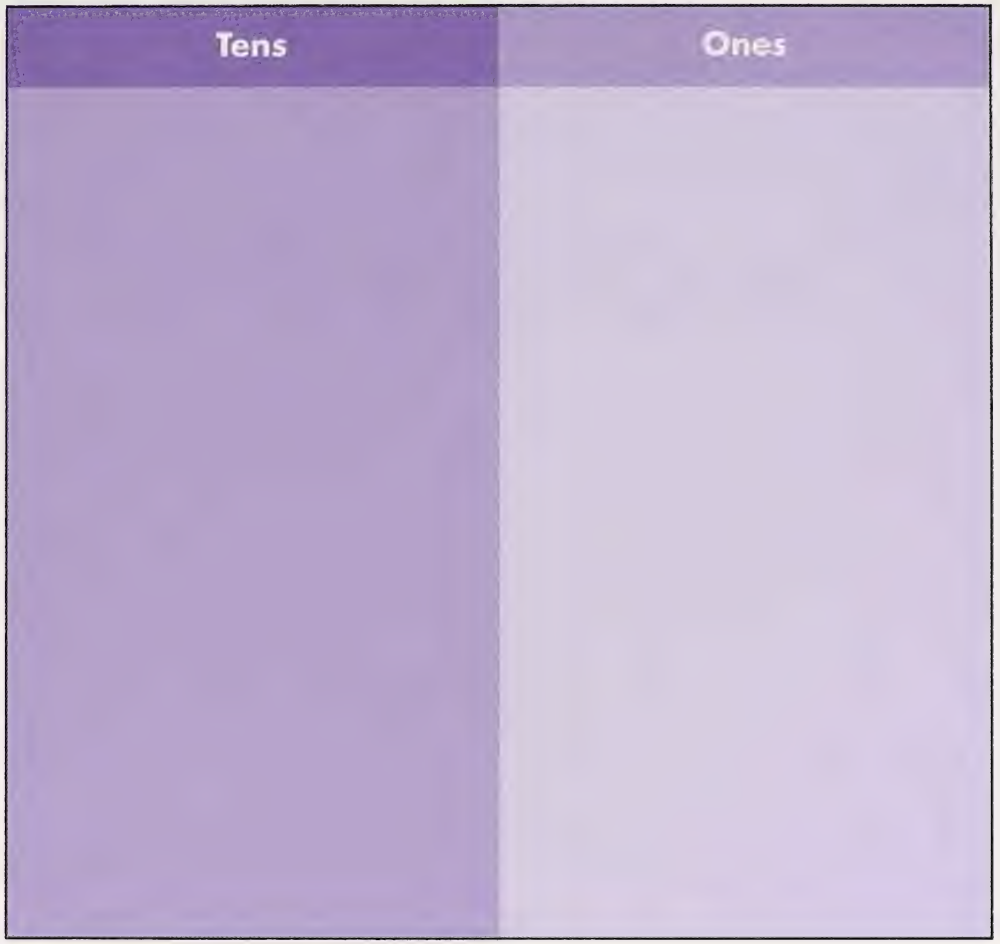
Number Spinner

Place-Value Mats


Tens
Ones

Number Cards

11	42	63	90	77
26	39	58	84	15
66	40	72	51	23
37	59	87	12	46

61	29	78	35	10

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